Rural and Small Urban Differences in Work Satisfaction with Autonomy and Nurse-Physician Interaction Among Acute Care Registered Nurses

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Abstract

Recent studies on job satisfaction and on magnet hospitals have emphasized the importance of nursing practice environments that encourage nurse autonomy and nurse-physician collaboration. However, little is known about acute care Registered Nurses' (RNs) satisfaction with these attributes in rural and small urban hospital settings, and whether community or hospital size is related to this satisfaction. To address these issues, a secondary analysis of data from the survey component of a national study *The Nature of Nursing Practice in Rural and Remote Canada* was conducted. Objectives were: (1) to examine satisfaction with autonomy and nurse-physician interaction among acute care RNs working in hospitals in communities that vary in size (rural vs. small urban); and (2) to identify the worklife attributes that are most important to acute care RNs working in these communities.

Measures of dependent variables included the Autonomy subscale and the Nurse-physician Interaction subscale from the Index of Work Satisfaction (Stamps, 1997). Analysis of variance was used to test hypotheses. Examination of important nursing worklife attributes included a thematic content analysis of an open-ended survey question: “What is the most important thing to you about your nursing position?”

This study found that the rural RNs had significantly higher levels of autonomy and nurse-physician interaction than the small urban RNs. These findings suggest that size of an organization or hospital setting does have an influence on the level of autonomous practice and collaborative interaction between nurses and physicians. The thematic categories that emerged from the analysis of the rural and

small urban responses included: the importance of acute care nursing practice, the organizational climate of the work environment, and sources of occupational predictability. An additional category that emerged solely from the analysis of the rural responses was the importance of nursing in a rural community.

The results of this study have added to the limited knowledge on the nature of acute care nursing practice in rural and small urban hospital settings in Canada. This study has also provided important data that may inform national policy development related to the recruitment and retention of RNs in rural and small urban settings.

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Finally, I would like to dedicate this thesis to my husband Ron. Thank-you for always encouraging me and for making me laugh. Also, thanks for helping me cope with my occasional bouts of Thesistic Malaise Syndrome. I am eternally grateful for your love and absolute confidence in me.

Table of Contents

List of Tables

Page

Chapter 1

Introduction

1.1 Introduction to the Problem

Health reform in the 1990s in Canada created many challenges for nursing practice, the most important being the nursing shortage that is projected to increase over the next decade (Advisory Committee on Health Human Resources [ACHHR], 2002; Baumann et al., 2001). Nursing practice settings that may be the most affected by this projected shortage are hospitals, specifically those within rural and remote areas of Canada. Registration data shows that 18% of all Registered Nurses (RNs) employed in nursing in Canada work in rural areas, where approximately 22% of the Canadian population live (Canadian Institute for Health Information [CIHI], 2002). As well, the total number of RNs working in rural Canada decreased from 42,303 in 1994 to 41,502 in 2000, while the total number of people living in rural and small town Canada has increased by 2.8% (CIHI, 2002). In addition, the rural RN workforce is aging; the average age of RNs increased from approximately 40.6 years in 1994 to 43 years in 2000 (CIHI, 2002). As a result, one of the main challenges facing the Canadian health care system is the retention of professional RNs in rural and remote hospital settings. Job dissatisfaction has been identified as one of the single most important factors affecting nurse turnover (Lum, Kervin, Clark, Reid, & Sirola, 1998). Unfortunately, the majority of research on job satisfaction of RNs has been conducted within urban hospital settings. As a result, little is known about

important variables related to job satisfaction of rural and remote hospital RNs in Canada.

1.2 Statement of the Problem

Attention to nurses' job satisfaction is especially important in the context of current and projected nursing shortages (ACHHR, 2002; Baumann et al, 2001). Even though parallel shortages are expected across all areas of healthcare, issues within hospital settings are considered top priority (Garon & Ringl, 2004). Of 17,450 urban and rural hospital nurses in Ontario, Alberta, and British Columbia, it was found that approximately one-third were dissatisfied with their jobs (Aiken et al., 2001). These findings are alarming as 54% of the total population of rural RNs practice within general hospital settings (CIHI, 2002). Moreover, Aiken et al. found that almost 30% of participants under 30 years of age were planning to leave their present job within the next year. This is troubling considering the aging RN workforce within rural Canadian settings, and the difficulty retaining younger nurses within these areas. The economic instability of smaller rural communities might also affect their ability to successfully compete for nurses within a highly competitive marketplace (Stratton, Dunkin, & Juhl, 1995).

In a summary report on health human resource planning in Canada, it was stressed that the propensity for nurses to leave the profession appears to be related to nurses' job satisfaction and the quality of their work environments (Fooks, Duvalko, Baranek, Lamothe, & Rondeau, 2002). Higher levels of RNs' job satisfaction have been directly linked to practice environments that encourage nurse autonomy, and nurse-physician collaboration (Keuter, Bryne, Voell, & Larson, 2000; Rafferty, Ball,

& Aiken, 2001; Rosentein, 2002). The literature regarding magnet hospitals supports the premise that professional nursing practice within these settings is characterized by professional nurse autonomy, and interactive collaboration with physicians; and that nurses are attracted to, and stay within environments that promote these attributes (Havens & Aiken, 1999; Scott, Sochalski, & Aiken, 1999). Even though increased satisfaction with professional autonomy and more collaborative nurse-physician relations are linked to improved nurse recruitment and retention, there is a paucity of literature available on these variables within rural hospital settings in Canada. In addition, Kanter's (1977, 1993) theory on the structure of power in organizations has established that larger organizations have more complex hierarchical structures and greater difficulty with distribution of power between the people who are employed on different hierarchical levels. Since it is likely that larger hospital organizations are located in larger communities, further study is needed regarding possible differences in levels of autonomy and nurse-physician interaction based on the size of rural or small urban communities or hospitals.

1.3 Purpose of the Study

The Nature of Nursing Practice in Rural and Remote Canada (NRRC) (MacLeod, Kulig, Stewart, Pitblado, & Knock, 2004) was the first study to explore rural and remote nursing worklife in all provinces and territories in Canada. The present study was a secondary analysis of a subset of data from the national survey component of the overall study (Stewart et al., 2005). The purpose of this analysis was: (1) to examine the job satisfaction variables of nurse autonomy and nurse-physician interaction from the perspective of rural and small urban acute care RNs,

making comparisons between RNs working in rural hospital settings and RNs working in small urban hospital settings; and (2) to determine and compare the work characteristics that rural and small urban acute care RNs perceive as most important to their nursing position.

1.4 Explanation for Rural/Small Urban Comparisons

Although the national survey focused on RN participants who worked in rural and small town regions (population < 10,000), rural and small urban comparisons were made possible because of the constraints of the original sampling method (Stewart et al., 2005) To obtain a stratified random sample of "rural" RNs from all the provincial and territorial nursing association databases, the only available rural indicator from the forms used in the annual RN registration process was postal code of residence rather than workplace. Many of the RNs who received questionnaires were living in an area that fit the rural definition, but commuted to larger centres. The other feature of the sampling process was the inclusion of all RNs who fit the "remote" criterion (outpost/nursing stations or territories), because the numbers of RNs are small in these regions. The formal definition of "rural" for the survey was not conveyed to the participants because the project sought their unbiased perspective on the definition of rural and remote in an open-ended question at the end of the questionnaire. As a result, rural and small urban comparisons were made possible for the present analysis.

1.5 Significance of the Study

Prior to the study on The Nature of Nursing Practice in Rural and Remote Canada (MacLeod et al., 2004), no national research data existed for exploration of

differences in job satisfaction with autonomy and nurse-physician interaction based upon the size of the community in which rural and small urban hospital RNs worked. This analysis has provided important data to inform policy development at a national level regarding the recruitment and retention of RNs in rural and small urban hospital settings. With a recent rise in community opportunities for RNs, hospitals are increasingly ill-equipped to compete for the recruitment and retention of the most qualified professional registered nurses (Aiken et al., 2001). The increased job dissatisfaction of RNs related to inadequate collaboration, lack of respect from physicians, and lack of a strong professional practice environment can be seen as a threat to the retention of RNs (Mee & Robinson, 2003; Upenieks, 2003b). The threat to the retention of RNs may be of even greater concern within rural hospital environments. The move toward promoting healthier workplaces for Canadian hospital RNs must include increasing nurses' job satisfaction, introducing lasting retention strategies and decreasing nurse turnover (ACHHR, 2002; Baumann, et al., 2001; Cameron, Armstrong-Stassen, Bergeron, & Out, 2004). These actions are crucial to the wellbeing of RNs, and indirectly to patients in Canada, and must be further examined within populations of rural and small urban RNs.

Chapter 2

Literature Review

2.1 Magnet Hospital Characteristics

During the 1980s, a group of American hospitals were labeled "magnet hospitals" due to their ability to attract and retain professional nurses during a national nursing shortage (Havens & Aiken, 1999; McClure, Poulin, Sovie, & Wandelt, 1983; Scott et al., 1999). The organization of nursing within magnet hospital settings has consistently demonstrated three core features that are key to professional nursing practice. These include professional nurse autonomy, nursing control over the practice environment, and collaborative nurse-physician relationships (Aiken, Smith, & Lake, 1994; Havens & Aiken, 1999; Scott et al., 1999; Upenieks, 2002). Nurses within magnet hospital environments that support these core features have higher levels of organizational empowerment and job satisfaction when compared to nurses in non-magnet hospitals (Upenieks, 2003a). Unfortunately, the majority of studies on magnet hospitals have been conducted within urban environments and little is known about magnet hospital characteristics within rural hospital settings.

2.2 Characteristics of Quality Workplaces

In a review of the literature, Doran (2005) stressed that collaborative interactions between nurses and physicians, has a significant influence on the quality of the work environment for registered nurses. In a similar review, Tranmer (2005)

suggested that professional nurse autonomy is also a key indicator of quality nursing work environments. Within the Canadian context, attributes identified that enhance registered nursing worklife are similar to the characteristics of magnet hospitals. Increased nurse autonomy in patient care as well as collaboration with other professionals, particularly physicians, has been shown to improve Canadian nurses' job satisfaction (Freeman & O'Brien-Pallas, 1998; Laschinger, Almost, & Tuer-Hodes, 2003; O'Brien-Pallas & Baumann, 2000). Specifically, Baumann et al. (2001) stressed that the freedom to act independently within the nurses' professional role and development of team relations between nurses and other health disciplines, including physicians, are integral to a healthy workplace for registered nurses. Professional nurse autonomy and nurse-physician collaborative interaction appear to be essential characteristics of positive nursing environments within Canada.

Fooks et al. (2002) suggested that dedication to improving aspects of nursing worklife such as increasing professional nurse autonomy and nurse-physician collaboration, leads to success in recruiting and retaining nurses over time. Baumann et al. (2001) pointed out that nurses are more satisfied with their jobs and more loyal to their employers when they are respected for their expertise and are able to provide input within their full scope of practice. Regrettably, the bulk of Canadian research on characteristics of healthy workplaces has been conducted within mainly urban settings (Blythe, Baumann, & Giovannetti, 2001; Burke & Greenglass, 2000; O'Brien-Pallas & Baumann, 1992). As a result, little is known regarding healthy workplace characteristics of autonomy and nurse-physician collaborative interaction in rural and small urban hospitals from a national perspective.

2.3 Rural and Small Urban Size of Community

Pong and Pitblado (2001) pointed out that there are almost as many definitions of rural as there are researchers. Although a single definition of "rural" Canada does not exist, researchers need some indicator of rural to provide for rural-urban comparisons (Pitblado, 2005). In most cases rural definitions in Canada are based upon geographical classification (du Plessis, Beshiri, & Bollman, 2001). In their article on the definitions of rural in Canada, du Plessis et al. outlined six designations of "rural", which are based upon Census geography as well as Canada Post geography. Some examples of these are: Census Rural, which includes individuals living outside places of 1,000 people or more, Non-Metropolitan Regions, or those living outside metropolitan regions with urban centres of 50,000 or more, and Rural Postal Codes which consists of individuals with "0" as the second character in their postal code.

Halfacree (1993) stressed that a single definition of rural is not reasonable or practical, and that definitions should be dependent on the task at hand. The NRRC project (Stewart et al., 2005) used the Statistics Canada definition of "Rural and Small Town" as those communities outside the commuting zone of centers with a population of 10,000 or more (du Plessis et al., 2001). The Statistics Canada breakdown of rural, smaller urban and larger urban areas of Canada also makes use of the designation "Census Agglomeration Area", which includes communities with populations greater than 10,000 but less than 100,000; communities with populations greater than 100,000 are designated a Census Metropolitan Area (CIHI, 2002; du Plessis et al., 2001). The Canadian Institute of Health Information report

that was released in 2002 on the distribution of rural and small town registered nurses in Canada, was the first report to make national comparisons between rural and urban RNs (CIHI, 2002). Similar distribution and workplace trend reports on Canadian RNs (e.g., CIHI, 2003, 2004, 2005b) declined to provide the same rural and urban differentiation in subsequent years. du Plessis et al. stressed that the benefit of the "Rural and Small Town" definition is that it can provide for comparative analysis at the regional, national and provincial/territorial level.

2.4 Registered Nurses' Job Satisfaction

Early meta-analyses have concluded that nurses' job satisfaction is significantly related to autonomy, recognition, communication with peers, communication and relationship with supervisors, stress, fairness, and locus of control (Blegen, 1993; Irvin & Evans, 1995). McGillis Hall's (2003) literature review identified factors that have the most significant influence on nurses' job satisfaction which include, autonomy and control over practice, intent to leave and turnover, job stress, organizational commitment, relationships with supervisors and peers including physicians, and organizational climate. A comprehensive review of the job satisfaction literature of strictly hospital based acute care nurses found similar factors including autonomy, control over practice, empowerment, nurse-physician communication and collaboration, professional recognition, workload, stress, and opportunity for advancement (Garon & Ringl, 2004). With regard to acute care hospital nurses, Garon and Ringl suggested that professional nurse autonomy has the most research evidence to support a relationship to job satisfaction, with nurse-physician collaboration having less evidence. Both job

satisfaction attributes may be interrelated, which would suggest that additional research is needed to explore possible relationships and to expand the supportive evidence.

2.4.1 Urban Hospital Settings

The majority of urban studies that have examined the concepts of autonomy and/or nurse-physician interaction in relation to nurses' job satisfaction have been conducted in the United States (Chinnis, Summers, Doerr, Paulson, & Davis, 2001; Decker, 1997; Dwyer, Schwartz, & Fox, 1992; Foley, Kee, Minick, Harvey, & Jennings, 2002; Johnson, 1991; Keuter et al., 2000; Keuter et al., 2000; Kramer & Schmalenberg, 2003; Larrabee et al., 2003; McNeese-Smith, 1999; Prothero, Marshall, Fosbinder, & Hendrix, 2000; Rothstein, & Carter, 1998; Tonges, Rothstein, & Carter, 1998). Additional urban studies that have examined the relationship between autonomy and/or nurse-physician interaction and job satisfaction have been conduced in Australia (Finn, 2002), Hong Kong (Fung-Kam, 1998), and Canada (Freeman & O'Brien-Pallas, 1998; Laschinger, Almost, & Tuer-Hodes, 2003).

Studies that have been conducted within strictly urban settings have established that hospital nurses who have more autonomy and authority within their practice environment also have higher levels of job satisfaction (Dwyer et al., 1992; Foley et al., 2002; Freeman & O'Brien-Pallas, 1998; Fung-Kam, 1998; Johnson, 1991; Kramer & Schmalenberg, 2003; Laschinger et al., 2003; Prothero at al., 2000; Tonges et al., 1998). In a study of a large Australian teaching hospital, Finn (2002) found autonomy to be the most important component for nurses' job satisfaction.

Additional studies that have been conducted in urban settings have also linked more collaborative relationships between nurses and physicians with higher levels of nurses' job satisfaction (Chinnis at al., 2001; Decker, 1997; Keuter et al., 2000; Larrabee et al., 2003; Laschinger et al., 2003; McNeese-Smith, 1999). The study by Adams and Bond (2000) conducted in the United Kingdom included nurses from all English health care regions and linked more collaborative relationships between nurses and physicians to higher job satisfaction. However, the researchers failed to define participants as rural or urban and did not compare the results between these two groups. Rosenstein (2002) also found similar results in his large-scale study of a network of American hospitals ranging from large metropolitan teaching centres to smaller, rural, not-for-profit community hospitals. Unfortunately Rosenstein (2002) also did not report the proportion of their sample that worked in a rural and/or urban hospital setting.

Rafferty et al.'s (2001) large-scale study of 10,022 staff hospital nurses in England found that nurses with higher levels of teamwork with physicians had higher levels of autonomy and were more satisfied with their jobs. They suggested that working well in a team with physicians is strongly associated with being able to act with professional autonomy as a nurse. Although Rafferty et al. (2001) did not report what proportion of nurses worked in rural and/or urban areas, the results of this study suggest that both autonomy and nurse-physician interaction are significantly related to a nurses' level of job satisfaction. While professional autonomy and collaborative nurse-physician interaction are important to nurses' job satisfaction, most research on these variables has been conducted within larger

urban settings outside of Canada and therefore cannot be generalized to Canadian rural or small urban hospital environments.

2.4.2 Rural Hospital Settings

In general, there appears to be limited research available on job satisfaction attributes of rural hospital RNs in Canada. Rural hospital RNs' job satisfaction has been studied in Australia (Chaboyer, Williams, Corkill, & Creamer, 1999; Hegney, McCarthy, Rogers-Clark, & Gorman, 2002), as well as the United States (Coward, Horne, Duncan, & Dwyer, 1992; Bushy & Banik, 1991; Hanson, Jenkins, & Ryan, 1990; Muus, Stratton, Dunkin, & Juhl, 1993; Ndiwane, 2003; Pan, Dunkin, Muus, Harris, & Geller, 1995; Stratton, Dunkin, Juhl, & Geller, 1995). The few Canadian studies that included rural hospital RNs in their study (Laschinger, Shamian, & Thomson, 2001; Shamian, Kerr, Laschinger, & Thomson, 2002) were conducted at a provincial level and therefore do not provide a broad understanding of Canadian RNs who practice within rural hospital settings.

Hegney et al. (2002) recruited a sample of 443 RNs in rural Queensland and found that job satisfaction was ranked as the most important reason for remaining in rural and remote practice. Pan et al. (1995) also found that job satisfaction played the most important role in RNs' decisions about leaving their current jobs. Stratton, Dunkin, Juhl, and Geller (1995) compared 3,514 rural RNs in three separate practice settings and revealed that community and public health nurses reported the highest levels of satisfaction, followed by long-term care nurses, with acute care hospital nurses having the lowest mean scores. The results of this study suggest that job satisfaction may be lower in rural acute care hospital nurses compared to other rural

settings (community and long-term care) and that further study of this population within Canada is necessary.

Hegney et al. (2002) explored 91 factors related to the retention of rural hospital nurses in Australia. The researchers found that relationships with health professionals ranked 6th and autonomy 8th overall as the main reasons that nurses would choose to remain in rural and remote practice settings (Hegney et al.). The remaining top rankings for retention included being part of a team and job satisfaction equally ranked as 1st, rural lifestyle 2nd, relationships with nursing colleagues 3rd, sense of community belonging 4th, relationship with supervisor 5th, maintenance of clinical skills and family-friendly work environment equally ranked as 6th with relationships with health professionals, and peer recognition was ranked as 7th (Hegney et al.). Findings from additional studies of rural hospital RNs have also measured satisfaction with these two variables (Coward et al., 1992; Laschinger et al., 2001; Shamian et al., 2002), as well as the importance or correlation of these to nurses' job satisfaction (Bushy & Banik, 1991; Chaboyer et al., 1999; Hanson et al., 1990; Stratton, Dunkin, Juhl, & Geller, 1995). The study by Chaboyer et al. (1999) of a 170 bed, remote Australian hospital, found that collaboration with medical staff was one of the three highest predictors of job satisfaction, accounting for 30% of the variance in global satisfaction scores of participants. In a study of 10 American hospitals with less than 100 beds Hanson et al. (1990) found that personal characteristics of participants had little effect on retention, and that autonomy was the most effective predictor of job satisfaction and intention to remain in the current nursing position.

The importance of job satisfaction dimensions of autonomy and nurse-physician interaction is also evident. Registered nurses from rural hospitals with less than 50 beds in South Dakota rated interactions with physicians and autonomy 3rd and 4th in importance out of seven dimensions of job satisfaction (Bushy & Banik, 1991). Another sample of rural hospital RNs rated nurse-physician interaction as 2nd in importance only to salary (Stratton, Dunkin, Juhl, & Geller, 1995). Mean importance ranges for all subscales including autonomy were 4.00 to 4.43 out of a possible 5.00, indicating that all dimensions were considered important to overall job satisfaction (Stratton, Dunkin, Juhl, & Geller). Autonomy and nurse-physician interaction have been linked to rural RNs' overall job satisfaction, as well as to their retention.

2.4.3 Comparisons Based on Size of Hospital or Nursing Unit

Few studies have specifically compared levels of professional nurse autonomy and/or nurse-physician collaborative interaction of acute care RNs based upon the size of hospital or organization in which they work. Potential differences in nurse autonomy and nurse-physician interaction based upon hospital size are of interest for the present study. An overview of the studies comparing the job satisfaction variables related to autonomy and/or nurse-physician interaction based upon size of hospital or nursing unit is included in Table 2.1. Coward et al. (1992) found that of 731 nurses working in rural Florida, those working in smaller hospitals (i.e. 1-49 beds) were shown to have significantly higher job satisfaction scores that those working in medium sized hospitals (i.e. 50-100 beds) and large hospitals (i.e. 100+ beds). RNs working in the small hospital settings also had significantly higher

scores for autonomy when compared to the RNs working in the medium and large hospitals. The trend in the research also suggests that the RNs working in the smallest hospitals have more collaborative interactions between nurses and physicians when compared to the RNs working in the medium and large hospitals. Researchers proposed that the nature of nursing practice may be different between these settings (small rural to large rural hospital nursing) and may account for the increased job satisfaction for RNs in the smaller hospital settings. In a study of urban hospitals, Blanchfield and Biordi (1996) found that acute care nurses from the smaller hospitals in their sample had significantly higher levels of authority and autonomy in comparison to nurses from the larger hospitals. They emphasized that the concepts of authority and autonomy are closely related and that without authority, autonomy is lacking the important element of knowledge and skill recognition. Specifically, they pointed out that professionals must have a special knowledge base and the authority to make decisions in order to earn the right to work autonomously. They reported that the nurses' perceptions of autonomy were significantly impacted by hospital affiliation and that it is possible that organizational variables such as the size of hospital might be predictors of authority and autonomy. They suggested that bureaucratic management structures created in larger hospitals may undermine nurses' authority and autonomy (Blanchfield & Biordi, 1996).

Table 2.1 Studies Comparing Job Satisfaction Variables Based Upon Size of Hospital or Nursing Unit

Author	Design of Study	Sample Characteristics	Job Satisfaction Measurement	Results/ Findings
Andrews et al. (2005)	Cross-sectional Survey (Descriptive, Multiple Regression Analysis)	Sample: Subsample of n=412 RNs who work alone in rural and remote Canada. This sample is from the Nature of Nursing Practice in Rural and Remote Canada (NRRC). The full survey sample was 3933.	**Decision Latitude:** Job Content Questionnaire (Karasek, 1985) **Collegial Contact:** Does the participant have face-to-face contact with colleagues? **Work Satisfaction:** Index of Work Satisfaction (Stamps, 1997)	• Face-to-face contact was a significant predictor of work satisfaction for RNs working alone, (p<0.05) • Having greater decision-making latitude was a significant predictor of work satisfaction, (p<0.001) Researchers propose that decision latitude as a predictor suggests that RNs working alone are in a position to exercise the necessary discretion to make decisions, organize their work and use their skills.
Blanchfield & Biordi (1996)	Cross-sectional Survey (Descriptive)	Sample: Staff RNs and Nurse leaders, Midwestern Hospitals, USA. N = 590; RR = 57% Hospital size and type of unit worked comparisons conducted.	**Authority:** Authority in Nursing Roles Instrument (ANRI) (Katzman, 1989)	**Authority:** • RNs affiliated with the smallest hospital (120 beds) had significantly higher scores on perceptions of authority M(78.79) SD(12.0) as compared to RNs affiliated with the largest hospital (350 beds), (p<0.01).

Author	Design of Study	Sample Characteristics	Job Satisfaction Measurement	Results/ Findings
Blanchfield & Biordi (1996) continued…			**Autonomy:** Autonomy Subscale of Work Satisfaction Index (Stamps & Piedmont, 1986).	• RNs who worked on smaller, more defined units had a significantly higher level of perceived authority M(76.99) SD(12.48) as compared to RNs who worked larger specialty units M(72.51) SD(15.63), (p<0.05). **Autonomy:** RNs affiliated with the hospital with shared governance and professional collaboration had significantly higher autonomy M(28.12) SD(5.01), compared to RNs affiliated with the hospital without shared governance M(24.98) SD(5.57), (p<0.001)
Coward et al. (1992)	Cross-sectional Survey (Descriptive, Correlational, Regression Analysis)	Sample: Nursing personnel Northern Florida (RNs & LPNs). N = 731; RR=62% **Small Rural Hospital** (1-49 beds) Nurses n=208 **Medium Comm. Hospital** (50-99 beds) Nurses n=239 **Large Urban Hospital** (100+ beds) Nurses n=284	Autonomy and Nurse-Physician Interaction: Work Satisfaction Index (Stamps & Piedmont, 1986)	Work Satisfaction Index: • **Interaction between nurses and physicians:** Small Rural hospitals M(11.1) SD(3.0), Medium-sized hospitals M(10.7) SD(3.1), Larger Urban hospitals M(10.6) SD(2.7), not statistically significant. • **Autonomy:** Small hospital M(8.0) SD(1.7), Medium hospital M(7.9) SD(1.7), Larger hospital M(7.6) SD(1.8), (p<0.01).

Author	Design of Study	Sample Characteristics	Job Satisfaction Measurement	Results/ Findings
Coward et al. (1992) continued…				Researchers suggested that nursing itself may be different between settings (smaller hospital nursing vs. large hospital nursing) which might account for the differences found.
Mark, Slayer, & Wan (2003)	Longitudinal (data collected at start of study and at six months)	Sample: N=68 Acute care hospitals; n=136 nursing units; Southeastern USA. RNs n=1682; RR=73.8% Patients n=1326; RR=80%	**Autonomy:** Control Over Nursing Practice Scale (Gerber, 1990) **Collaboration with Physicians:** Collaborative Practice Scale (Weiss & Davis, 1985) Variables were defined as professional nursing practice.	• **Hospital level Analysis:** Professional nursing practice was diminished on larger nursing units (-.42). Professional nursing practice predicted higher mean levels of nurses' work satisfaction (.38). Variance explained by the professional nursing practice model for nursing satisfaction was 71.4%. • **Nursing Unit Level Analysis:** Larger unit size contributed to lower mean levels of nurse's satisfaction (-.19) and lower mean levels of patient satisfaction (-.35). Nursing units in hospitals with enhanced professional nursing practice had smaller nursing units on average. Larger unit size was associated with lower levels of satisfaction for both nurses and patients.

Author	Design of Study	Sample Characteristics	Job Satisfaction Measurement	Results/ Findings
Shamian et al. (2002)	Cross-sectional Survey (Descriptive, Correlational, Linear Regression)	Sample: RNs from Ontario Acute-Care Hospitals N= 6,609; RR=59% *(Sample used for hospital level measurement)* Hospitals with fewer than 10 RNs were excluded from analysis 6,188 RNs represented in this study analysis. Hospitals n = 160 **Small Hospitals** n=49 **Comm. Hospitals** n=95 **Teaching Hospitals** n=16	Autonomy and Nurse-Physician Relationships: Revised Nursing Work Index (NWI-R, Aiken & Patrician, 2000)	Individual responses were aggregated, then used to generate hospital-level measures. Revised Nursing Work Index: • **Autonomy:** Larger teaching hospitals reported higher levels of autonomy M(13.1) SD(0.8) than the smallest rural hospitals M(12.9) SD(1.3), although the smallest rural hospitals had significantly higher levels of autonomy than medium sized community hospitals M(12.7) SD(0.7), (p<0.05) • **Nurse-physician relationships:** Were rated slightly better in smaller hospitals M(8.8) SD(0.9) than both teaching hospitals M(8.7) SD(0.5) and community hospitals M(8.4) SD(0.6), although not statistically significant.

Mark, Salyer, and Wan (2003) conceptualized professional nursing practice as including autonomy, nurse-physician collaboration and higher work satisfaction. They compared results between size of hospital units and found that acute care RNs from smaller units were more satisfied and reported enhanced levels of professional nursing practice, and that larger unit size was associated with lower levels of satisfaction for both nurses and patients. Shamian et al. (2002) aggregated 6,188 individual responses regarding magnet hospital characteristics of Ontario acute care RNs and used this to generate hospital-level measures. The trend found in the research suggests that the smaller hospitals may have better nurse-physician relationships than community hospitals (i.e. medium sized hospitals) and teaching hospitals (larger sized hospitals) and higher levels of autonomy than community hospitals. Although differences were modest, stronger differences in favor of smaller hospital settings may have been observed if 19 of the smallest hospitals, accounting for close to 500 RNs had not been excluded from the final analysis. Excluding the smallest hospitals may have underestimated the relationship between hospital size and autonomy and nurse-physician interaction.

In an analysis of the NRRC data on rural and remote Canadian RNs, Andrews et al. (2005) found that RNs who were working alone (in smaller work settings) were more satisfied with their work if they had more freedom in making work related decisions and more face-to-face contact with colleagues. The researchers also found that greater decision-making latitude and face-to-face contact with colleagues were significant predictors of work satisfaction for RNs who were working alone. It may be that decision-making latitude is synonymous with

autonomous practice for RNs who are working alone, and may account for the relationship to their work satisfaction. The characteristic of having face-to-face collegial contact may also be related to the perception that collaboration with other professionals (i.e. physicians) is necessary within smaller nursing settings, and may relate to aspects of work satisfaction.

In general, it appears that RNs working within smaller hospitals or smaller nursing units have higher levels of autonomy and more collaborative relationships with physicians. The studies reviewed suggest that factors related to having increased autonomy and more collegial (nurse-physician) interaction are related to the RNs' level of job or work satisfaction. Further study of Canadian hospital RNs working in rural and small urban communities are necessary to determine if there are differences in their perceived autonomy and nurse-physician interaction.

2.5 Conceptual Issues

2.5.1 Professional Nurse Autonomy

In a review of the literature Tranmer (2005) emphasized that professional nurse autonomy is a complex and multidimensional process that is lacking a concrete definition. Many concepts have emerged through the literature that are closely related to, and are used interchangeably, to measure and define nursing autonomy. Some of these include control over nursing practice, control over work environment, professional autonomy, clinical autonomy, (Kramer & Schmalenberg, 2003; Porter-O'Grady, 2001; Scott et al., 1999; Stamps, 1997) empowerment (Kramer & Schmalenberg, 1993; Laschinger, Wong, McMabon, & Kaufmann, 1999; Manojlovich & Laschinger, 2002), authority (Blanchfield & Biordi, 1996), decision-

making autonomy (Dwyer at al., 1992) and independent and interdependent decision-making (Wade, 1999). Professional nurse autonomy has been described as the right to exercise clinical and organizational judgment within the framework of an interdependent health care team within the legally granted freedom of the discipline (MacDonald, 2002). This definition that recognizes professional nursing as a unique discipline that has the authority to make independent, as well as interdependent decisions, will be accepted for the purpose of this study.

2.5.2 Nurse-Physician Collaborative Interaction

Recent studies on collaborative relationships between nurses and physicians have also recognized many interrelated concepts used to define and measure nurse-physician collaborative interaction. Some of these include teamwork, professional respect, communication, cooperation, interaction, collaboration, multidisciplinary, coordination of work, joint decision-making (Baggs, Ryan, Phelps, Richeson & Johnson, 1992; Doran, 2005; Henneman, Lee, & Cohen, 1995; Stamps, 1997; Zwarenstein & Bryant, 2000), power sharing, shared responsibility, nonhierarchical relationships, and contribution of expertise (Henneman et al.). Krairiksh and Anthony (2001) defined collaboration as the "interaction between nurses and physicians with trust, respect, and joint contributions of knowledge, skills, and value to accomplish the goal of quality patient care" (p. 17). For the purpose of this study, this definition identifies the key factors that contribute to more collaborative interactions between nurses and physicians.

2.6 Theoretical Framework

Kanter's (1977, 1993) theory on the structure of power in organizations was the basis of hypotheses for the present study. Kanter defined power as the ability to get things done and to mobilize resources. Further, Kanter emphasized that when people have more power and control over the conditions of their work environment, under these conditions, people will experience higher levels of autonomy and will have more participation in organizational decisions. In addition, Kanter stressed that empowering people through generating more autonomy and having more involvement in decision-making, results in an increased capacity for effective action. Kanter stressed that power in an organization rests on the ability to solve dependency problems with respect to the system as a whole as well as around individuals. Kanter made reference to the importance of the size of an organization and stressed that larger, more complex hierarchical environments foster dependency (i.e. reliance on superiors for direction). Kanter explained that people in larger hierarchical work environments become dependent on those who control important contingencies and have more personal power (i.e. more personal influence within organizations). Physicians within larger hospital organizations may have higher levels of personal power related to contingencies controlled, and may experience dependency behavior from RNs. Physicians who have more personal power in larger organizations, with a "power over" mentality toward their RN colleagues may not be open to more collaborative interactions. The opposite is also true that dependency is reduced in smaller organizations where people can work more independently and have greater decision-making latitude (Kanter).

This theoretical framework can be operationalized in the context of the present study. A higher degree of acute care RNs' satisfaction with autonomy and nurse-physician interaction would be associated with higher access to power structures. This relationship would be more likely to occur within smaller organizations. In the context of the present study, it is assumed that smaller hospital organizations would be present in smaller communities. RNs working within smaller, rural communities would work more independently and have more control over the practice environment and subsequently higher autonomy than RNs working in small urban communities with larger, more hierarchical hospital organizations. RNs working within smaller, rural communities may also have lower levels of organizational dependency and more decision-making latitude and subsequently more collaborative nurse-physician interactions than those working in larger, more hierarchical hospital organizations in small urban communities.

2.7 Hypotheses and Research Question

Hypotheses based on Kanter's (1977, 1993) structure of power in organizations were: (1) RNs working in rural communities within smaller hospital organizations would have higher levels of autonomy than RNs working in small urban communities within larger hospital organizations; and (2) RNs working in rural communities within smaller hospital organizations would have more collaborative nurse-physician interactions, than RNs working in small urban communities within larger hospital organizations. An additional research question that was examined with comparisons made between the rural and small urban open-

ended responses was: What is most important to acute care RNs about their nursing position in rural and small urban hospital settings in Canada?

Chapter 3

Methodology

3.1 Design

Data from the cross-sectional survey from the multi-method project, The Nature of Nursing Practice in Rural and Remote Canada (MacLeod et al., 2004; Stewart et al., 2005), was used for this secondary analysis. The national survey questionnaire, which totaled thirty pages, incorporated numerous embedded scales, as well as a comprehensive set of open-ended questions to explore the issues most relevant to rural and remote nursing practice (Stewart et al.) (Appendix A). Content validity for the original survey was determined through pilot testing of the overall survey and embedded scales, as well as through consultation with expert researchers, advisors and RNs who practice in rural and remote areas of Canada (Stewart et al). The research design for the present study was a non-equivalent, post-test only, comparison group design (Burns & Grove, 2005; Cook & Campbell, 1979). Groups were non-equivalent on the variable "size of community" which served as a proxy indicator for size of hospital. In the NRRC survey, no data were collected on hospital size, but the size of work community was reported and served as a proxy variable. In the rural study conducted by Stratton, Dunkin, Szigeti and Muus (1998), hospital size was found to be a valid proxy for community size. Therefore, it was inferred that rural size of community (population 10,000 or less), would have smaller hospital organizations than small urban size of community (population

>10,000 but <100,000). The autonomy subscale and the nurse-physician subscale from a modified version of Stamps' (1997) Index of Work Satisfaction and an open-ended question regarding important work characteristics to the sample of acute care hospital RNs was the focus for this study.

3.2 Sample Characteristics and Setting

The sampling frame for the original study included a stratified random sampling of rural dwelling RNs from all provinces in Canada, as well as the full population of RNs in the northern territories and northern outpost settings (Stewart et al., 2005). The 3933 participants were representative of rural Canadian RNs (CIHI, 2002), and the overall response rate was 68% (Stewart et al., 2005). The original sampling method included collaboration with the 12 professional nursing associations in Canada to access the registered nurses' databases in which anonymity and confidentiality were maintained (Stewart et al.). For more detail on sampling issues see section 1.4 on rural and small urban comparisons.

The acute care hospital RN sample for this analysis included the 1238 RNs who defined their work setting as a "general hospital" and their primary area of practice as "acute care" (Appendix A). The 1238 acute care hospital RNs provided a homogeneous sample based on practice area and represented RNs from this work setting in all the provinces and territories in Canada. To provide for appropriate comparisons between smaller communities, "rural communities" were defined using the Statistics Canada definition of "Rural and Small Town" as those communities outside of the commuting zone of centers with a population of 10,000 or more (du Plessis et al., 2001). The "small urban" communities were defined using the

Statistics Canada "Census Agglomeration Area", which includes communities with populations greater than 10,000 but less than 100,000 (CIHI, 2002; du Plessis et al., 2001). Based on these designations the acute care RN sample was categorized according to those who work in communities with a population of 10,000 or less, which represented rural hospital acute care RNs, and those working in communities with a population greater than 10,000 which represented small urban hospital acute care RNs (Appendix A).

From the acute care sample N=1238 RNs, the categorization based on size of community resulted in 811 RNs who worked in rural communities and 427 RNs who worked in small urban communities. According to Cohen (1988, p. 312), a cell size of greater than 400 provided a power of 0.82 to detect a small effect size, with the significance level set at $p<0.05$. Since selection bias could be a threat to the internal validity of the proposed research design (Burns & Grove, 2005; Cook & Campbell, 1979), groups were compared on participant characteristics. These included gender, age, educational background, number of years licensed to practice, marital status, dependent children or relatives, shifts worked and nursing employment status (Appendix A) to ensure that the acute care sample characteristics were similar between groups as well as representative of Canadian hospital acute care RNs.

3.3 Ethical Considerations

The Behavior Research Ethics Board of the University of Saskatchewan approved the research proposal on August 4, 2005. The NRRC survey was previously approved by the University of Saskatchewan Advisory Committee on

Ethics in Behavioral Science Research. The return of a completed questionnaire after reading the letter constituted implied consent for this study. The letter requested participation in the study, explained how participants were selected, the value of participating in the study, as well as confidentiality of responses and guarantee of anonymity (Stewart et al., 2005) (Appendix F). Anonymity was also maintained by requesting each provincial/territorial nursing association to select all outpost nurses and a random sample of RNs, using postal codes to identify rural residence (Stewart et al). In the 4 out of 10 instances where the provincial/territorial nursing associations (Newfoundland, Nova Scotia, British Columbia, and Ontario) did release the names and addresses of members to the research team, a contract to protect confidentiality was implemented (Stewart et al.).

3.4 Measurement

Stamps' (1997) Index of Work Satisfaction (IWS) is a 7-point Likert scale that includes seven subscales of work satisfaction, as well as measurement of the perceived importance of each subscale. The NRRC survey adapted a version of the IWS by reducing each subscale to five items, which was then embedded into the questionnaire (Stewart et al., 2005). Instead of linking each subscale to importance, the variable of "importance" was examined with an open-ended question "what is most important about your nursing position?" (Stewart et al.). The modified Stamps' Autonomy subscale included the following items (Appendix A):

1. I have too much responsibility and not enough authority.
2. A great deal of independence is permitted, if not required, of me.

3. I am sometimes frustrated because all of my activities seem programmed for me.
4. I am sometimes required to do things on my job that are against my better professional nursing judgment.
5. I have the support of my supervisor to make important decisions in my work.

The modified Stamps' Nurse-Physician Interaction subscale included the following items (Appendix A):

1. Physicians in general cooperate with nursing staff at my organization.
2. There is a lot of teamwork between nurses and doctors at my organization.
3. I wish the physicians here would show more respect for the skill and knowledge of the nursing staff.
4. Physician(s) working with this organization generally understand and appreciate what the nursing staff does.
5. The physician(s) working at this agency look down too much on the nursing staff.

The above subscales and the "importance" question (Appendix A, question G. 16) were of interest for the present study. Each 5-item subscale was summated to give a range of scores from 5 to 35, with a higher score representing higher autonomy or higher nurse-physician collaborative interaction. Counterbalanced items, which were included (Stamps, 1997) to correct for response set bias, were reverse scored. A correlation coefficient was calculated for the modified Autonomy and Nurse-

Physician Interaction subscales for the acute care sample from the national survey. The analysis showed that there was a low but significant correlation between the Autonomy subscale and the Nurse-Physician Interaction subscale ($r = 0.43$, $p<0.001$). Although the significance of this result may be due to the large sample size, the low value of the correlation coefficient indicates a weak relationship between the two subscales.

The internal consistency reliability was replicated for the adapted IWS embedded within the survey questionnaire (Stewart et al., 2005). The modified IWS for the overall study sample achieved adequate reliability with an alpha of 0.87 compared to previous studies ranging from 0.82-0.91 (Stamps, 1997). Considering the NRRC administered the modified IWS to RNs in many different practice areas (e.g., public and community health, home care, hospitals, long term care), it was originally thought that this may have lowered estimates of internal consistency. It was proposed that the sample of acute care hospital RNs in the present study may have been a more homogeneous sample. For this reason the internal consistency reliability was also replicated for the present acute care sample. As anticipated the Nurse-Physician Interaction subscale for the acute care sample achieved a higher alpha of 0.88, which is comparable to other studies ranging from 0.77-0.84 (Stamps, 1997; Stewart et al.). In contrast, reliability results were substantially lower for the Autonomy subscale for the present acute care sample with an alpha of 0.58, compared to other studies ranging from 0.66-0.76 (Stamps, 1997; Stewart et al.). Future researchers should use a modified version of Stamp's subscale with caution

when attempting to measure nursing autonomy for rural and small urban acute care RNs.

3.5 Study Procedure

The original mailed survey used a modified version of Dillman's Tailored Method that focused on personalization and persistent follow-up (Dillman, 2000; Stewart et al., 2005). All mailed survey packages included a survey cover letter, the survey method including translated French language letter and questionnaire where applicable, a stamped self-addressed return envelope and a pencil with the study name as a token of appreciation (Stewart et al.). The cover letter included explanations of response confidentiality, appreciation for participation in the study as well as signatures of the principal investigator and a co-investigator (Stewart et al.). The survey involved four separate mailings which consisted of a) an initial survey package, b) signed follow-up and a thank-you/reminder letter two weeks later, c) a second package to non-respondents two weeks after the follow-up letter, and d) a third package one month after the second replacement package (Stewart et al.). Eligible questionnaires were entered into a database program including the verbatim, open-ended survey data. Approximately 10% of questionnaires were double-entered and corrective procedures were used to improve the accuracy of data entry when errors were found. Questionnaires that were initially completed in the French language were translated into English and recorded. Eligible questionnaires including the verbatim open-ended response data, were transferred from a database program into a Statistical Package for Social Sciences (SPSS) system file (Stewart et al.). Data were cleaned and edited using frequency runs to check for errant and

unusual values as well as logical inconsistencies. These inconsistencies were then checked against the original questionnaire and resolved (Stewart et al.).

3.6 Analytical Procedures

Data that was examined for the present study was from the acute care hospital RNs who participated in the national survey. This sample included those RNs who defined their work setting as a general hospital and identified acute care as their area of current practice. Participants were then separated into rural RNs and small urban RNs based upon the size of the community in which they worked. Descriptive statistics were used to describe the total sample of acute care hospital RN participants as well as the two subgroups of rural and small urban hospital RNs. The Statistical Package for Social Sciences (SPSS 13.0 Windows) was used to analyze the selected quantitative data as well as make comparisons between groups.

Demographic information (age, gender, province/territory of residence, educational background, years licensed to practice, marital status and presence of dependent children or relatives) was analyzed. As well, additional employment characteristic data (employment status, types of shifts worked and number of workplace RNs) were analyzed and comparisons were made between rural and small urban RNs. Crosstabulations were used to analyze the nominal and ordinal (categorical) data in order to determine group similarities and differences. Comparisons of interval (continuous) data were also conducted using t-tests to determine if mean differences were present. A significance level of .05 was used.

Analysis of variance (ANOVA) was used to test the hypotheses that were proposed for the present study. Two one-way ANOVAs were conducted in SPSS,

using community size as the between-subjects factor. In one ANOVA, the dependent variable was the participants' scores on the Autonomy subscale of the Index of Work Satisfaction (Stamps, 1997). In the second ANOVA, the dependent variable was the participants' scores on the Nurse-Physician Interaction subscale of the Index of Work Satisfaction (Stamps).

In addition to the quantitative analyses, an analysis of selected open-ended survey data was conducted and managed with use of Non-numerical Unstructured Data Indexing, Searching, and Theorizing (NUD*IST- 6) software which is a qualitative research package. A content analytical approach was utilized in order to make valid inferences from the data present in the context of the open-ended survey responses (Krippendorff, 2004). The open-ended responses for the survey question, "What is the most important thing to you about your nursing position?" were analyzed separately for the rural and small urban participants. The separate analysis of both the rural and small urban responses gave a broad overview of important themes that were present for both groups. Common themes were then compared and contrasted between the two groups, with eventual organization of the responses into comprehensive thematic categories.

The scientific rigor or trustworthiness of the qualitative analysis was also addressed. Credibility, auditability, fittingness, and confirmability are specific criteria that are commonly used to judge the scientific rigor or trustworthiness of qualitative research (Guba & Lincoln, 1981). To establish credibility, or the truth of the findings, the survey data (i.e., open-ended written responses) were originally transcribed verbatim and the participants' language was used to code and organize

the data into comprehensive thematic categories and subthemes. Credibility of data from the French language questionnaires was addressed by starting with extensive pilot testing and review of the language in the questionnaire in relation to the English language version (Stewart et al., 2005). Data entry of French comments was conducted by a bilingual research assistant who translated the verbatim comments and entered them in English. Any questions about meaning were checked with at least one other member of the research staff. Credibility was also ensured through peer debriefing of the qualitative data (both raw and coded), by the thesis supervisor Dr. Norma Stewart. Auditability was achieved by keeping the raw data (including completed questionnaires and transcribed data) and analysis memos, which provide an audit trail of the various steps from the raw data, to analysis and interpretation. Fittingness examines whether the findings of the research are applicable or meaningful to the individuals outside of the study (LoBiondo-Wood & Haber, 2002). This was established by providing sufficient descriptive data in the master's thesis, as well as linking the theoretical observations in the data to current literature. Finally, confirmability is ensured when the criteria of credibility, auditability, and fittingness are met (Guba & Lincoln, 1981).

Chapter 4

Results

4.1 Introduction

For the present study a non-equivalent, post-test only, comparison group design (Burns & Grove, 2005; Cook & Campbell, 1979) was used with groups being non-equivalent on the variable "size of community", which also served as a proxy indicator for size of hospital. Hypotheses that were tested in the present study were based on Kanter's (1977, 1993) structure of power in organizations. The two hypotheses that were proposed for the present analysis were: 1) RNs working in rural communities within smaller hospital organizations would have higher levels of autonomy than RNs working in small urban communities within larger hospital organizations; and 2) RNs working in rural communities within smaller hospital organizations would have more collaborative nurse-physician interactions, than RNs working in small urban communities within larger hospital organizations. An additional open-ended research question was examined with comparisons made between the rural and small urban responses on: What is most important to acute care RNs about their nursing position in rural and small urban hospital settings in Canada? Prior to conducting the analyses to test the above hypotheses, descriptive statistics were conducted in order to describe basic sample characteristics of the acute care hospital RNs and to compare these characteristics between the rural and small urban acute care groups.

4.2 Rural and Small Urban Participants

Of the 3933 RNs who participated in the original national survey, a total of 1238 RNs (32%) were categorized as working in acute care hospital settings. The hospital based, acute care RNs selected for this analysis were divided into two groups based on the size of their work community. These divisions were based on du Plessis' (2001) designation of "rural and small town" and Census Agglomeration Area. The rural hospital RNs (n=811, 65.5%) were defined as those individuals who worked in communities with a total population of 10,000 or less. The small urban hospital RNs (n=427, 34.5%) were defined as those individuals who worked in communities with a population greater than 10,000 but less than 100,000.

4.3 Demographics

4.3.1 Age, Gender, and Province/Territory of Residence

The age of the acute care hospital RNs ranged from 21 to 70 years (M=42.2, SD=9.19); 11 participants did not provide their age. An independent sample t-test was used to compare the mean age of RNs between the rural and small urban groups. Small urban RNs were significantly younger than rural RNs, with a mean difference of 1.39 years (Table 4.1). Acute care participants were also categorized into five age groups. These categories were based upon the categories present in the national data available on rural and urban RNs in Canada (CIHI, 2002). There were significant differences noted between the rural and small urban groups when crosstabulations including the age groups were conducted. Specifically there were a greater percentage of rural RNs who were 55 years or older (n=98, 12.2%) than the small urban RNs in the same age category (n=29, 6.9%, $p < .05$) (see Table 4.2).

Table 4.1 t-test of Mean Age of Rural vs. Small Urban Acute Care RNs

	Size of Community (Rural vs. Small Urban)	n	Mean	Standard Deviation	t	*p*
Age	Rural RNs	805	42.87	9.33	2.52	.012*
	Small Urban RNs	422	41.48	8.88		

* Significance level < .05

Table 4.2 Crosstabulations of Rural / Small Urban vs. Age Categories

Age Categories	Rural RNs (n=805)	Small Urban RNs (n=422)	Pearson Chi-Square	*p*
< 25 Years	16 (2.0%)	9 (2.1%)	10.891	.028*
25-34 Years	154 (19.1%)	94 (22.3%)		
35-44 Years	270 (33.5%)	160 (37.9%)		
45-54 Years	267 (33.2%)	130 (30.8%)		
55 Years and Up	98 (12.2%)	29 (6.9%)		
Total	805(100.0%)	422 (100.0%)		

* Significance level < .05

The overwhelming majority of the acute care RN participants were female (n=1195, 96.5%). Only 3.0% (n=24) of the RNs were male in the rural RN group and 4.2% (n=18) of the RNs were male in the small urban RN group. Crosstabulations were conducted using the variables that coded for gender and community size. No significant differences were observed between the two groups (see Table 4.3).

Table 4.3 Crosstabulations of Rural/ Small Urban RNs vs. Female/Male Gender

	Gender (n=1237)*			
	Female	Male	Pearson Chi-Square	*p*
Rural Acute Care RNs	787 (97.0%)	24 (3.0%)	1.365	.243
Small Urban Acute Care RNs	408 (95.8%)	18 (4.2%)		

* Does not sum to total sample size due to missing values

The province or territory of residence for the acute care RNs were categorized into five regions, similar to the categories of residence in Stewart et al., 2005. The sample of acute care hospital participants included RNs from all the provinces and territories in Canada (refer to Table 4.4). The greatest number of RNs resided in the Atlantic provinces (n=422, 34.1%) followed closely by Alberta and British Columbia (n=261, 21.0%). The smallest number of rural and small urban acute care RNs resided in the Northern territories and Nunavut (n=143, 11.6%).

Table 4.4 Province or Territory of Residence of Acute Care Hospital RNs

Province or Territory of Residence (n=1237)*	f	%
Atlantic Provinces	422	34.1
Quebec/ Ontario	184	14.9
Manitoba/ Saskatchewan	227	18.4
Alberta/ British Columbia	261	21.0
Northern Territories and Nunavut	143	11.6
Total	1237	100.0

* Does not sum to total sample size due to missing values

Categories of the province or territory of residence for both the rural and small urban RNs are also presented in Table 4.5.

Table 4.5 Province of Territory of Residence of Rural and Small Urban RNs

Province or Territory of Residence	Rural (n=811)	Small Urban (n=426)
Atlantic Provinces	284 (35.0%)	138 (32.4%)
Quebec/Ontario	102 (12.6%)	82 (19.2%)
Manitoba/Saskatchewan	181 (22.3%)	46 (10.8%)
Alberta/British Columbia	203 (25.0%)	58 (13.6%)
Northern Territories and Nunavut	41 (5.1%)	102 (24.0%)
Total	811(100.0%)	426(100.0%)

* Does not sum to total sample size due to missing values

4.3.2 Education, Years Practiced, Marital Status and Dependents

The majority of the acute care hospital RN participants (n=1010, 82.4%) reported a diploma as their highest level of nursing education attained. Fewer participants achieved a Bachelor's degree (n=212, 17.3%), and a small number obtained a Master's Degree or PhD in Nursing (n=3, 0.2%). Crosstabulations were conducted using the variables coding for education (i.e., diploma vs. degree) and community size. A significantly greater number of rural acute care RNs (n=680, 84.6%) reported earning a diploma than small urban acute care RNs (n=330, 78.4%). As well, 21.6% of the small urban participants had attained at least a degree in nursing compared to only 15.4% of the rural RN participants (Table 4.6).

Table 4.6 Crosstabulations of Rural/ Small Urban RNs vs. Nursing Education

Highest Attained Nursing Education (n=1225)†

	Diploma	Degree (BSN, MN, PhD)	Pearson Chi-Square	*p*
Rural RNs	680 (84.6%)	124 (15.4%)	7.322	.007*
Small Urban RNs	330 (78.4%)	91 (21.6%)		

* Significance level < .01 † Does not sum to total sample size due to missing values

The number of years that the rural and small urban acute care RNs had been licensed to practice ranged from 1 to 45 years. Mean years of practice were compared between the rural and small urban acute care RNs, with statistically significant results. On average, rural acute care RNs had been licensed to practice significantly longer than the small urban acute care RNs with a mean difference of 1.45 years (See Table 4.7). Years licensed to practice were also organized into categories with comparisons made between the two groups. These categories of 10-year intervals, were based upon the categories present in the national data available on rural and urban RNs in Canada (CIHI, 2002). No significant differences were noted between rural/ acute care RNs and the categories of years licensed to practice (Table 4.8).

Table 4.7 t-test of Mean Years Practiced of Rural vs. Small Urban Acute Care RNs

	Size of Community (Rural vs. Small Urban)	n	Mean	Standard Deviation	t	*p*
Years Practiced	Rural RNs	805	18.92	9.90	2.489	.013*
	Small Urban RNs	425	17.47	9.34		

* Significance level < .05

Table 4.8 Crosstabulations of Rural / Small Urban vs. Years Practiced Categories

Years Practiced	Rural RNs (n=805)	Small Urban RNs (n=425)	Pearson Chi-Square	*p*
1-10 Years	192 (23.9%)	106 (24.9%)	6.439	.092
11-20 Years	253 (31.4%)	156 (36.7%)		
21-30 Years	249 (30.9%)	121 (28.5%)		
31 Years plus	111 (13.8%)	42 (9.9%)		
Total	805(100.0%)	425(100.0%)		

The majority of the hospital acute care RNs reported being married or common-law (n=1053, 85.3%). Of the entire sample of acute care RNs, 63% (n=776) also reported having dependent children or relatives. Crosstabulations conducted for marital status and dependents between the rural and small urban acute care RNs found no statistically significant differences between the groups (see Table 4.9).

4.4 Employment Characteristics

4.4.1 Employment Status, Type of Shifts, and Number of RNs

The analysis of nursing employment status represents those acute care RNs who answered only one choice of status, which excluded those RNs who chose two or more types of employment status. Approximately half of the acute care hospital RNs reported working permanent full-time, with another one-third working permanent part-time. The remainder of RNs reported working in a job share, casually, or in a contract, term, or other (Table 4.10).

Table 4.9 Crosstabulations of Rural/ Small Urban vs. Marital Status & Dependents

	Marital Status (n=1235)		Pearson Chi-Square	*p*
	Married/ Common-law	Single/ Divorced/ Widowed		
Rural Acute Care RNs	684 (84.5%)	125 (15.5%)	0.952	.329
Small Urban Acute Care RNs	369 (86.6%)	57 (13.4%)		
	Dependent Children or Relatives (n=1232)		Pearson Chi-Square	*p*
	Yes	No		
Rural Acute Care RNs	499 (61.8%)	309 (38.2%)	1.523	.217
Small Urban Acute Care RNs	277 (65.3%)	147 (34.7%)		

* Does not sum to total sample size due to missing values

Table 4.10 Nursing Employment Status

Employment Status *(n=1096)	f	%
Full-time/Permanent	568	51.8%
Part-time/Permanent	376	34.3%
Job Share	12	1.1%
Casual	122	11.1%
Contract/Term/Other	18	1.6%

* Those that only answered one type of employment status

Three categories of employment status, which included full-time/permanent, part-time/permanent, and one category of job share/casual/contract/term were used to compare the rural and small urban participants. Crosstabulations conducted between nursing employment status and rural/ small urban RNs revealed no significant differences (See Table 4.11).

Table 4.11 Crosstabulations of Rural/ Small Urban vs. Nursing Employment Status

	Employment Status (n=1096)*			Pearson Chi-Square	*p*
	Full-time/ Permanent	Part-time/ Permanent	Job Share/Casual/ Contract/Term/Other		
Rural RNs	376 (52.9%)	237 (33.3%)	98 (13.8%)	1.007	.604
Small Urban RNs	192 (49.9%)	139 (36.1%)	54 (14.0%)		

* Those that only answered one type of employment status

A higher proportion of acute care hospital RNs reported working only 12-hour shifts (n=627, 50.6%), with fewer RNs working 8-hour shifts (n=407, 32.9%).

Some of the acute care RNs specified working a mixture of overtime and on-call as well as 8- and 12- hour shifts (n=204, 16.5%). Crosstabulations conducted between types of shifts worked and the rural and small urban RN participants revealed no significant difference (p=.482) between the rural and small urban RNs who worked 8- and 12- hour shifts and those that worked a mixture of overtime, on-call and rotating 8- and 12- hour shifts. A significant relationship was noted (p=.016) when crosstabulations were conducted between 8-hour shifts and 12-hour shifts and rural/ small urban size of community. A greater majority of small urban RN participants (65.7%) worked 12-hour shifts than the rural RN participants (57.9%), and more rural RNs (42.1%) worked 8-hour shifts when compared to the small urban RNs (34.3%) (Table 4.12).

Table 4.12 Crosstabulations of Rural/ Small Urban vs. Types of Shifts Worked

	Types of Shifts Worked (n=1034)†		Pearson Chi-Square	*p*
	8-Hours Shifts	12-Hour Shifts		
Rural Acute Care RNs	283 (42.1%)	390 (57.9%)	5.839	.016*
Small Urban Acute Care RNs	124 (34.3%)	237 (65.7%)		

* Significance level < .05 † Those that worked 8-hour vs. 12-hour shifts

Registered Nurses were asked, "At your primary workplace how many RN positions (in full time equivalents) are there including yourself?" and were given space to record the number. For the sample of acute care hospital RNs (n=1058), the mean number of workplace RNs was 37.2 (SD=55.7), with a range in number of RNs from 0.5 to 444 for each workplace. For the entire acute care sample, the mode

was equal to10, and the median number of workplace RNs was 15. The mode and median were used as grouping variables for Table 4.13. As shown, over one-third of the acute care RNs reported having 10 or less workplace RNs, and almost half reported having greater than 15 RNs within the workplace (Table 4.13).

Table 4.13 Number of Rural and Small Urban Workplace RNs

Number of RNs (n=1058)*	f	%
0.5 to 10 RNs	399	37.7
10.5 to 15 RNs	154	14.6
Greater than 15 RNs	505	47.7
Total	1058	100.0

* Does not sum to total sample size due to missing values

The median number of workplace RNs for the acute care sample was 15 and was therefore used as a grouping variable to categorize the data. Number of workplace RNs was compared between the rural and small urban RNs with categories of 15 RNs or less and greater than 15 RNs respectively. Significant differences were noted between groups, specifically 66.9% of the small urban group had greater than 15 workplace RNs with only 39.1% of rural RNs reporting greater than 15. As well, there were significantly more rural RNs (n=444, 60.9%) that had 15 or less RNs in the workplace when compared to the small urban participants (n=109, 33.1%) (See Table 4.14).

Table 4.14 Crosstabulations of Rural/ Small Urban vs. Number Workplace RNs

	Number of Workplace RNs (n=1058)†		Pearson Chi-Square	*p*
	≤15 RNs	> 15 RNs		
Rural Acute Care RNs	444 (60.9%)	285 (39.1%)	70.095	.000*
Small Urban Acute Care RNs	109 (33.1%)	220 (66.9%)		

* Significance level <.001 †Does not sum to total sample size due to missing values

4.5 Autonomy and Nurse-Physician Interaction Comparisons

The autonomy subscale and the Nurse-Physician Interaction subscale from the Index of Work Satisfaction (Stamps, 1997) were used to test the hypotheses that were proposed for this analysis. Each 7-point subscale contained five items and was summated to give a possible range of scores from 5 to 35, with a higher score representing higher autonomy or higher nurse-physician collaborative interaction. A total of 1231 acute care hospital RNs provided responses for both the autonomy subscale and the nurse-physician interaction subscale. The mean score of the autonomy subscale for the acute care sample was 23.2 (SD=4.9) with a range in scores from 6 to 35. The nurse-physician interaction subscale showed similar results with a mean score of 23.9 (SD=6.6) and a range in scores from 5 to 35 for all acute care participants.

In order to make comparisons between groups, two one-way ANOVAs were conducted using community size (rural vs. small urban) as the between-subjects factor. In the first ANOVA, the dependent variable was the participants' scores on the Autonomy subscale of the Index of Work Satisfaction (Stamps, 1997). In the

second ANOVA, the dependent variable was the participants' scores on the Nurse-Physician Interaction subscale of the Index of Work Satisfaction (Stamps).

As predicted in the first hypothesis, the mean scores for the autonomy subscale were statistically significantly higher [$F(1, 1229)= 5.60$, $p<0.05$] for the rural acute care RNs who worked in the smaller hospitals (n= 807, M=23.44, SD=4.86) than for the small urban RNs who worked in the larger hospitals (n= 424, M=22.74, SD=5.04) (See Table 4.15). As predicted in the second hypothesis, the mean scores for the nurse-physician interaction subscale were also significantly higher [$F(1, 1229)=27.78$, $p<0.001$] for the rural acute care RNs who worked in the smaller hospitals (n=807, M=24.57, SD=6.38) than for the small urban RNs who worked in the larger hospitals (n=424, M=22.5, SD=6.61) (See Table 4.16).

Table 4.15 Autonomy Subscale Rural vs. Small Urban

		n	Mean	Standard Deviation
Autonomy Subscale	Rural RNs	807	23.44	4.86
	Small Urban RNs	424	22.74	5.04

ANOVA Table Significance (Autonomy)	Sum of Squares	Degrees of Freedom	Mean Square	F	*p*
Between Groups	135.99	1	135.99	5.602	.018*
Within Groups	29836.05	1229	24.28		
Total	29972.04	1230			

* Significance level p < .05

Table 4.16 Nurse-Physician Interaction Subscale Rural vs. Small Urban

		n	Mean	Standard Deviation
Nurse-Physician Subscale	Rural RNs	807	24.57	6.38
	Small Urban RNs	424	22.50	6.85

ANOVA Table Significance (Nurse-Physician)	Sum of Squares	Degrees of Freedom	Mean Square	F	*p*
Between Groups	1189.62	1	1189.62	27.78	.000*
Within Groups	52633.93	1229	42.83		
Total	53823.55	1230			

* Significance level $p < .001$

The hypotheses that were proposed for this study were both supported by the above statistical analyses.

4.6 Content Analysis of Open-ended Responses

Out of the 1238 acute care hospital RN participants, a total of 1098 (88.7%) participants provided at least one response to the open-ended survey question "What is the most important thing to you about your nursing position?" The rural and small urban responses were analyzed separately, which resulted in approximately the same proportion of participants responding from both the rural size of community (n=718, 88.5%) and the small urban size of community (n=380, 89%). A total of 895 rural and 479 small urban responses (some participants recorded more than one response

to the open-ended question) were coded using the NUD*IST- 6 qualitative software program. The content of the open-ended survey responses were analyzed for common themes. Three main thematic categories related to the importance question, emerged through the content analysis for both the rural and small urban groups: the importance of acute care nursing practice, the organizational climate of the work environment, and sources of occupational predictability. Within each of the three main thematic categories, sub-themes were identified. An additional category that emerged solely during the analysis of the rural responses was the importance of nursing in a rural community. Finally, some of the acute care participants did not provide a response that was related to the "importance" question, and instead used the space to share common issues present within their nursing practice. These responses were present for both the rural and small urban participants and therefore were also included as a broad thematic category. See Table 4.17 for a breakdown of the rural and small urban responses.

Table 4.17 Number of Open-ended Responses to "Importance" Question

Thematic Categories	Rural Responses (f=895) f (%)	Small Urban Responses (f=479) f (%)
Importance of acute care nursing practice		
Quality patient centred care	389 (43)	206 (43)
Expert nursing knowledge	116 (13)	63 (13)
Broad scope of practice	81 (9)	43 (9)
Organizational climate of the work environment		
Interprofessional interaction	95 (11)	45 (9)
Work satisfaction	42 (5)	33 (7)
Nursing Autonomy	35 (4)	15 (3)
Working conditions/ work environment	21 (2)	9 (2)
Sources of occupational predictability		
Type of shifts worked/ Scheduling	45 (5)	27 (6)
Salary/ Benefits/ Job security	31 (3)	20 (4)
Nursing in a rural community	16 (2)	---------
Common nursing issues raised	24 (3)	18 (4)
Total	895 (100)	479 (100)

4.6.1 Acute Care Nursing Practice

A total of 898 rural and small urban responses reflected the importance of aspects related to acute care nursing practice. The three themes that emerged included quality patient centered nursing care, expert nursing knowledge, and the broad scope of practice that is present in rural and small urban acute settings.

4.6.1.1 Quality Patient Centered Nursing Care

The importance of being able to provide quality patient care was a frequent theme that emerged in both the rural and small urban response sets. Forty-three percent of responses for both groups were coded into the theme of quality patient centered care (Table 4.17). The importance of high standards of care, the centrality of the patient or client, and the ability to act as a patient advocate were some of the most imperative thoughts expressed by both the rural and small urban RNs.

- *"Providing the highest standard of care I am allowed with today's workload/ time restraints."* (Rural)
- *"Able to provide quality nursing care."* (Small urban)
- *"My patients' rights, comfort and knowledge is very important to me."* (Rural)
- *"Being able to provide excellent care to my patients as individuals."* (Small urban)
- *"I feel the most important part of my job is to be the patient's advocate… caring for the patients with their input."* (Rural)

4.6.1.2 Expert Nursing Knowledge

The importance of possessing an expert level of nursing knowledge was also a frequently observed theme in both the rural and small urban response sets. Each of the groups has 13% of responses coded into this theme (Table 4.17). Main ideas expressed included the importance of possessing a high level of competence in nursing judgment, problem solving ability and skillful provision of direct patient/client care.

- *"My experience and judgment skills."* (Small urban)
- *"The increasing knowledge in rural nursing, being able to prioritize."* (Rural)
- *"Problem solving in multi problem scenarios."* (Small urban)
- *"To be knowledgeable with advanced training; able to anticipate and diagnose a problem."* (Rural)
- *"The ability to learn new things everyday and use my expertise in various fields."* (Small urban)
- *"We have no doctors on site about 65% of the time and I am the first line of medical diagnosis and treatment to emergent patients."* (Rural)

4.6.1.3 Broad Scope of Practice

Many of the rural and small urban participants also included responses that related to the variety of the work environment and the broad scope of practice that is present within rural and small urban acute care practice. Again, the groups had the same proportion of responses with 9% coded into this theme (Table

4.17). Key ideas expressed by the participants included the importance of a diversity of experiences, having multiple nursing roles, and moving away from a routine model of care delivery.

- *"Broad scope of practice in rural nursing 'Nurse of all trades'."* (Rural)
- *"Every shift is different and varied, I love the challenge and constant change."* (Small urban)
- *"My position has a very broad spectrum- from maternity to cardiac, to emergency, no two days are ever alike."* (Rural)
- *"You get to work with a large variety of clients with different levels of acuity."* (Small urban)
- *"The variety of people and conditions; the unpredictable nature of rural nursing."* (Rural)

4.6.2 Organizational Climate

A total of 295 rural and small urban responses reflected the importance of the organizational climate of the acute care work environment. The four themes that were included in this category are interprofessional interaction, work satisfaction, nursing autonomy, and working conditions/ work environment.

4.6.2.1 Interprofessional Interaction

Many rural and small urban participants expressed the importance of having collaborative interactions between the various professionals that work together in acute care practice. Eleven percent of rural responses and 9% of small urban responses were coded into this main theme (Table 4.17). Viewpoints that were

expressed by the rural and small urban RNs as most important included working as a health care team, having mutual respect from other health professionals (specifically physicians), and having their expert knowledge and nursing judgment recognized by other professions.

- *"Physicians rely and refer to my experience and judgment skills."* (Small urban)
- *"Being recognized for the qualities you have and given the respect for such in your field."* (Rural)
- *"My knowledge and work ethic is respected and valued by the physicians and coworkers in my department."* (Small urban)
- *"I work very closely with the physicians; I feel they trust my assessment and listen to my suggestions."* (Rural)
- *"I work in an area where there is great teamwork."* (Small urban)
- *"That we all work as a team and respect each other's knowledge and facilitate learning of others."* (Rural)

4.6.2.2 Work Satisfaction

Many of the rural and small urban responses also referred to aspects of job or work satisfaction as being most important. Five percent of rural responses and 7% of small urban responses were coded within the theme of work satisfaction (Table 4.17). Both rural and small urban respondents sometimes simply stated the phrase "job satisfaction" or "being satisfied with my work/job". Some additional examples of responses are included.

- *"Personal job satisfaction."* (Small urban)
- *"My job fulfills me as a health professional."* (Rural)
- *"I am satisfied with my job position at this time."* (Small urban)
- *"I love what I do and have no desire to do anything else."* (Rural)

4.6.2.3 Nursing Autonomy

The importance of having independence, freedom and autonomous practice in both rural and small urban settings was also a theme that emerged in the category of organizational climate. Four percent of rural responses and 3% of small urban responses were coded into this main theme (Table 4.17). Personal perspectives that the rural and small urban RNs shared as the most important included making their own decisions, using their own independent judgment, and managing their own care of patients and clients.

- *"The autonomy of independent practice."* (Rural)
- *"I like having the power to make decisions."* (Small urban)
- *"The increased confidence in the ability to apply our skills and knowledge independently."* (Rural)
- *"I am in a profession that allows me much latitude."* (Small urban)
- *"In rural areas nurses are the front lines of health care-being the first to assess."* (Rural)

- *"I am allowed within the existing framework of the organization to have autonomy in my nursing practice."* (Small urban)

4.6.2.4 Working Conditions/ Work Environment

The final theme that was included in the thematic category of organizational climate was the importance of having safe working environments and realistic working conditions. Two percent of responses for both groups were coded into this main theme (Table 4.17). Some of the main ideas expressed by the rural and remote RNs included the importance of adequate staffing, having sufficient time to ensure quality care, and safe practice environments.

- *"Working in a safe environment for myself and the patients that I care for."* (Rural)
- *"Better working conditions."* (Small urban)
- *"That I have the time and staffing ratio to give quality, safe patient care."* (Rural)
- *"To create and maintain a positive work environment."* (Small urban)
- *"That I have enough time and support to provide excellent care to my patients."* (Rural)

4.6.3 Sources of Occupational Predictability

A total of 123 rural and small urban responses reflected on aspects of the nursing occupation that are relied on and should be considered predictable. The two themes that were included in this category are the type of shifts worked/scheduling and salary/benefits/job security.

4.6.3.1 Type of Shifts Worked/ Scheduling

Some of the rural and small urban participants identified that having flexibility in their work scheduling and hours of work, and working their desired shifts were the most important aspects of their nursing position. Five percent of rural responses and 6% of small urban responses were coded into this theme (Table 4.17).

- *"I have mostly the number of hours/types of shifts I want so as to still maintain a stable home for my family and a professional career."* (Rural)
- *"The hours/rotation is well suited for me to continue my studies."* (Small urban)
- *"The flexibility; I can choose where to work and when."* (Rural)
- *"That I'm only working days after 20 years."* (Small urban)
- *"The flexibility of scheduling allows me to be both nurse, mother and farm wife at the same time."* (Rural)

4.6.3.2 Salary/Benefits and Job Security

The importance of having an adequate salary and a sense of job security were also minor themes that emerged for both the rural and small urban participants. Three percent of rural responses and 4% of small urban responses were coded into this theme (Table 4.17).

- *"Now I am only working in nursing for the money."* (Small urban)
- *"Adequate income to support my family."* (Rural)
- *"It pays the mortgage, adequate compensation for the demands of the job."* (Small urban)
- *"Money and extended benefits."* (Rural)
- *"Job security."* (Rural and Small Urban)

4.6.4 Nursing in a Rural Community

An additional thematic category that emerged solely through the analysis of the rural responses to the open-ended question, were those referring to the importance of working within a rural community. A total of 16 rural responses (2%) were coded into this category (Table 4.17). Main ideas expressed by the rural participants were the importance of making a difference within their own community, providing local access to health services, and having a personal connection with and knowing the people being cared for.

- *"I grew up in this area, I feel that when I care for my patients I am contributing to my community, to my people."*
- *"Access to health care in your own community, to allow clients to be cared for in their home community."*
- *"Living in a small community, I have the opportunity to help people who I know."*
- *"The difference that I can make in this community."*
- *"In our rural facility we know most of our clients, so it is nice to be able to care for them and give a little extra TLC if time and work load allows."*

4.6.5 Common Nursing Issues Raised

Although the original survey question asked RNs what was most important about their nursing position, many of the rural and small urban participants chose to use the space to voice common frustrations and issues specific to nursing practice. Three percent of rural responses and 4% of small urban responses were included in this final thematic category (Table 4.17). Many of the rural and small urban participants referred to specific aspects of their jobs that were a frustration, and many expressed concerns about the present state of nursing in general.

- *"I have lost faith in doctors and administrators, I am considering leaving the profession; I am overworked and undervalued."* (Small urban)

- *"It is also the most frustrating aspect of my job, because with staffing cuts of the 90's we struggle to work with less staff and increased volumes and acuity of patients."* (Rural)
- *"I am so dissatisfied with the state of nursing right now."* (Small urban)
- *"I get no compensation (sick time, etc.) for being on call 6 months of the year; no back up support by administration."* (Rural)
- *"We are all working way too hard for our ages (45-55+) and too much abuse by the patients."* (Small urban)

Both quantitative and qualitative analyses were presented in this chapter. Rural and small urban RN participants were compared on demographic characteristics, employment characteristics, levels of autonomy and nurse-physician interaction and important aspects of rural and small urban worklife. The similarities and differences that were found between the rural and small urban acute care RN groups will be explored more fully in the following discussion.

Chapter 5

Discussion

5.1 Introduction

The purpose of the present analysis of 1238 rural and small urban acute care hospital RNs was to determine whether rural RNs working in smaller hospital settings had higher work satisfaction with autonomy and nurse-physician interaction than small urban RNs working in larger hospital settings. In addition, the intention of this analysis was to describe the sample of acute care RNs and to examine what worklife characteristics they consider most important to their nursing positions. This study found that the rural RNs who were working in the smaller hospital settings had significantly higher levels of autonomy and nurse-physician interaction than the small urban RNs who were working in the larger hospitals settings. The results of this secondary analysis raise a variety of questions related to possible differences in RNs' perceptions about nurse autonomy and nurse-physician interaction in rural and small urban hospital settings.

In general, the rural and small urban groups were similar on most sample characteristics including gender, years licensed to practice, marital status, dependent children or relatives, employment status, and important aspects of their nursing positions expressed. Some significant differences were noted between the two groups such as age, highest attained nursing education, type of shifts worked, and number of workplace RNs. In this chapter the results of this study will be discussed

with attention paid to policy implications that are relevant to employers, nursing leaders, policy makers and those interested in the worklife of nurses that practice in rural and small urban acute care settings in Canada. Finally the limitations of the present study will be outlined and suggestions for future research will be addressed.

5.2. Rural and Small Urban Participants

A total of 32% (n=1238) of the overall sample of rural and remote RNs (n=3933) from the national survey worked in acute care hospital settings. When compared to the national data available on the distribution of rural and urban RNs in Canada for the year 2000, this proportion of hospital acute care RNs (32%) is comparable to the national percentage of those that work in rural acute care (34.4%) and slightly lower than those that work strictly in urban acute care (44.8%) practice areas (CIHI, 2002). This sample of rural and small urban acute care RNs may be more representative of the rural distribution of RNs, due to the exclusion of RNs who work in Census Metropolitan areas or larger urban settings, of which the national data on the distribution of urban registered nurses includes (CIHI, 2002). A larger proportion of the study sample was categorized as working in a rural community (65.5%, n=811) than the proportion that was working in a small urban community (34.5%, n=427). This larger percentage of rural RNs would be expected due to the sampling frame of rural postal code of residence used in the original survey. The use of this sampling method ensured the inclusion of a greater proportion of RNs who practice in rural areas (less than 10,000 population), but could not control for the smaller number of RNs who resided in rural areas and commuted to work in small urban areas (greater than 10,001 population). For this

reason, the ability to make comparisons based on size of community (rural vs. small urban) was made possible. These comparisons are based on the Statistics Canada designation of "Rural and small town" and "Census Agglomeration Area" (du Plessis et al., 2001) and are consistent with the study by Henderson-Betkus and MacLeod (2004) that compared job and community satisfaction between rural and small urban Public Health Nurses.

5.3 Demographics

5.3.1 Age, Gender, and Province/Territory of Residence

The sample of acute care hospital RNs is demographically representative of Canadian rural and urban RNs with respect to age and gender. The sample of acute care hospital RNs represents an aging population with a mean age of 42.2, which is comparable to the national average age of both rural (42.9) and urban (43.4) RNs in Canada (CIHI, 2002). In general, the average age of most health professionals in Canada (including RNs) is increasing, with a rise from 39.2 in 1994 to 41.6 in 2003 (CIHI, 2005a). Although the average age of most health professionals is on the rise, the average age of Canadian RNs is increasing at a faster rate in recent years. Specifically, the average age of Canadian RNs rose 3.1 years (39.6 to 42.7 years) from 1994 to 2003 whereas the average age of General Practitioners rose only 1.9 years (43.9-45.8) for the same time period (CIHI, 2005a). This continuing trend raises issues related to the retention of RNs who are nearing retirement and the recruitment of younger RNs to rural and small urban acute care settings.

Small urban RNs were significantly younger than rural RNs with a mean age difference of 1.39 years. These differences are consistent with the study by Coward et al., (1992) which reported that nurses from larger hospitals were significantly younger than nurses that worked in the smallest rural hospitals. The results of the present study differ slightly from the national data that reports that the urban RNs are on average older than the rural RNs in Canada (CIHI, 2002). When age categories were compared between the rural and small urban participants, groups were comparable on all categories except for the 55 years plus category. A significantly greater percentage of rural RNs (12.2%) were 55 years or older when compared to the small urban RNs (6.9%). The national data available on the different age groups of rural RNs in Canada are generally comparable to the rural RN age groups in the present study. One exception is that in the national data on urban RNs, approximately 13.9% of urban RNs in Canada are age 55 years or older (CIHI, 2002) and only 6.9% of the small urban RNs are in the same age group from the present study. This may account for the trend of the rural RNs being slightly older in the present study, which is opposite to the trend presented in the national data (CIHI, 2002). In general, the rural and small urban RNs were similar in age and were representative of Canadian rural and urban RNs.

In this study, no significant differences were found when gender distribution comparisons were conducted between the rural and small urban RN groups. A lower number of male RNs in both the rural (3.0%) and small urban (4.2%) groups were found to be similar to the national average of male RNs who work in rural areas (4.4%) and male RNs who work in urban areas (4.8%) (CIHI, 2002). Gender

distribution in this study is similar to other nursing studies on work satisfaction that have included rural RNs in their samples (Chaboyer et al., 1999; Hanson et al., 1990).

The province or territory of residence for the rural and small urban RNs was generally consistent between groups, except for the larger proportion of small urban RNs (24%) living in the northern territories when compared to only 5.1% of rural RNs. This may be related to the majority of acute care hospital settings in the territories and Nunavut being located in small to larger urban cores, with few hospitals being located in the smaller rural areas. The province or territory of residence of all acute care participants was also compared with the national data available on the distribution of rural and urban RNs. The RNs from rural and small urban areas of Ontario and Quebec may have been underrepresented when compared to the national data available. The largest proportion of RNs in Canada were registered in Quebec and Ontario both in rural areas (52.2%) and urban areas (62.3%) in 2000 (CIHI, 2002), with only 14.9% of the acute care sample residing in the provinces of Ontario and Quebec from the present study. In part, this may be a result of the CIHI (2002) data being representative of all practice areas of RNs including community and public health, long-term care, as well as hospitals and acute care. The acute care hospital RNs from the Atlantic provinces (34.1%) were slightly overrepresented in the present study, when compared to the national data of rural Atlantic RNs (16.6%) and urban Atlantic RNs (7.9%) (CIHI, 2002).

5.3.2 Education, Years Practiced, Marital Status, and Dependents

The highest attained nursing education for the total sample of acute care hospital RNs was similar to the highest nursing education level of RNs from the distribution of RNs in rural and small town Canada in 2000 (CIHI, 2002). When rural and small urban comparisons were conducted, a significantly greater percentage of rural RNs had earned a diploma as their highest education level (84.6%) when compared to the small urban RNs (78.4%). These findings are similar to the rural-urban comparisons available in the national data, which found that 81.4% of rural RNs and 74.3% of urban RNs had attained a diploma as the highest nursing education in 2000 (CIHI, 2002). The higher number of small urban RNs (21.6%) attaining at least a Bachelor's degree in nursing when compared to the rural RNs (15.4%) is also reflective of the national trends of urban vs. rural RNs (CIHI, 2002) and is consistent with other Canadian studies that included rural and urban acute care hospital RNs (Laschinger et al., 2001; Shamian et al., 2002). This trend of having more diploma prepared rural RNs may be due in part to the lack of access to educational opportunities and university settings within the rural areas of Canada. As well, the trend of small urban RNs having higher education levels may be related to the increasing numbers of nursing students obtaining a BSN as entry to practice. In 2003 the Canadian Nurses Association confirmed that to become a registered nurse in most Canadian provinces and territories, a student must obtain a degree in nursing (Canadian Nurses' Association [CNA], 2003). In the year 2002, at the time that data collection was concluding for the present study, the majority of new graduates in Canada held a degree in nursing (CIHI, 2003). The decision for nursing

students to remain and work in urban areas immediately following graduation may have also played a role in the higher number of degree prepared RNs being located in the small urban areas. Recent studies that examined the profile of newly graduated RNs in Saskatchewan for the years 2002 to 2005 found that the majority of participants (65%-86%) indicated that their first nursing position would be or was located in an urban area (Nursing Education Program of Saskatchewan [NEPS], 2005). This trend of most new graduates remaining in urban practice areas following graduation is likely to occur across most of the provinces and territories in Canada.

When the mean number of years licensed to practice was compared, the small urban acute care RN group had been licensed for significantly less years than the rural acute care group. These results were similar to a study on work satisfaction that included both rural and urban acute care RNs within their sample (Shamian et al., 2002). They found that the RNs who practiced in the largest hospital settings in the urban areas also had practiced significantly fewer years in total when compared to the RNs in the small rural hospitals (Shamian et al.). When crosstabulations of ten-year categories of years licensed to practice were conducted no differences were noted between the two groups. The categories of years licensed to practice were also compared with the rural and urban data available at the national level. In general, the rural and small urban RNs were most representative of the rural RNs from the national data, with approximately the same percentage of RNs in each ten-year category from the present study (CIHI, 2002).

When marital status and dependent children or relatives were compared between the rural and small urban RN groups, no differences were observed. The

majority of the acute care hospital RNs were either married or common-law (rural 84.5%, small urban 86.6%), and had dependent children or relatives (rural 61.8%, small urban 65.3%). The results on marital status and dependents are consistent with other studies on aspects of work satisfaction that included rural RNs in their samples (Hanson et al., 1990; Muus et al., 1993; Pan et al., 1995). A conflicting study on aspects of work satisfaction found that over 50% of their sample of remote Australian RNs were single and without children (Chaboyer et al., 1999). However, the work setting represented in the study was categorized as a "tourist" town and therefore the nursing workforce was primarily made up of traveling RNs who were more likely to be single and without dependents.

5.4 Employment Characteristics

5.4.1 Employment Status, Type of Shifts, and Number of RNs

Approximately half of both the rural acute care RNs (52.9%) and the small urban acute care RNs (49.9%) reported working full-time with no differences observed between groups. These results are generally comparable to the national average of nursing employment status, with 49.6% or all rural RNs and 56.1% of urban RNs working in full-time positions (CIHI, 2002). These results are in contrast to the study by Shamian et al. (2002), which found that a significantly lower number of RNs were working part-time in the largest urban hospitals (46%) than the RNs working in the smaller rural hospitals (63%). The small urban RNs from the present study may be more representative of the rural RN workforce in Canada with an even balance of those RNs who work in full-time vs. part-time or casual positions.

The type of shifts worked, including 8-hour shifts, 12-hour shifts, and a mixture of overtime, on-call and rotating 8- and 12-hour were also examined in the present study. Just over half of the acute care participants (50.6%) reported working 12-hour shifts exclusively, which is consistent with many acute care hospital settings that staff their units, based upon 12-hour around the clock nursing coverage (Hoffman & Scott, 2003). Fewer of the acute care RNs worked 8-hour shifts exclusively (32.9%), with the smallest proportion working a mixture of on-call, overtime and rotating 8- and 12-hour shifts (16.5%). When comparisons were conducted between groups, a significantly greater number of rural RNs (42.1%) were working 8-hour shifts exclusively when compared to the small urban RNs (34.3%). As well a significantly larger number of small urban RNs (65.7%) worked 12-hour shifts exclusively when compared to the rural RNs (57.9). It has been proposed that work shift patterns may contribute to the overall role stress experienced by hospital RNs. The trend in the research by Hoffman and Scott (2003) suggested that those RNs who work mainly 8-hour shifts have lower levels of role stress when compared to RNs who work 12-hour shifts exclusively. It may be that those RNs who work in rural settings prefer working fewer hours consecutively in order to reduce their role stress, and therefore the organization of shifts in the rural size of hospitals may reflect this preference. There was no national data found that compares type of shifts worked between rural and urban hospital settings.

The number of workplace RNs was also compared between the rural and small urban acute care groups. This analysis was conducted in order to determine if the number of workplace RNs was greater for the small urban settings when

compared to the rural settings. This method was used to verify that the variable "size of community" was also appropriate to use as a proxy variable for the size of hospital setting. Additional research has supported that hospital size is a valid proxy for community size (Stratton et al., 1998). The median number of workplace RNs for the acute care sample was 15 and was therefore used as a grouping variable to categorize the data. Significant differences were observed with 60.9% of the rural RN group reporting 15 or less RNs, and only 33.1% of the small urban RN group having 15 or less RNs. There were also significantly more of the small urban RNs (66.9%) that had greater than 15 RNs in their workplace, when compared to the rural RNs (39.1%). These findings provide evidence that a higher number of RNs were practicing in the small urban hospital settings, which would suggest that the small urban hospital settings would be larger in size when compared to the rural hospital settings. Although no survey data exists that can definitively confirm that small urban hospitals are larger than rural hospitals, the number of workplace RNs was analyzed in order to support this theory.

5.5 Autonomy and Nurse-Physician Interaction Comparisons

Based on Kanter's (1993, 1977) structure of power in organizations, the first hypothesis of the present study stated that the RNs who were working in the rural communities within smaller hospital organizations would have higher levels of autonomy than RNs working in the small urban communities within larger hospital organizations. The results of the analysis that was conducted supported this hypothesis. The rural RNs from the smaller hospital organizations had significantly higher levels of nursing autonomy than their small urban counterparts from the

larger hospital organizations. The second hypothesis for the present study, also based on Kanter's theory (1993, 1977), stated that the RNs who were working in the rural communities within smaller hospital organizations would have more collaborative nurse-physician interactions, than the RNs who were working in the small urban communities within larger hospital organizations. The results of the analysis that was conducted also supported the second hypothesis proposed. The rural RNs from the smaller hospital organizations had significantly higher collaborative interaction with physicians than the small urban RNs who worked in the smaller hospital settings. This finding suggests that size of an organization or hospital setting does have an influence on the level of autonomous practice that is perceived by the RNs and also has an influence on the level of collaborative interaction between nurses and physicians.

5.5.1 Theoretical Reasons for Observed Differences

5.5.1.1 The Structure of Power in Organizations

Kanter (1993, 1977) proposed that the structure of power in organizations is synonymous with autonomy and refers to having access to whatever is needed in order to take action. Kanter also stressed that greater independence and access to power structures are present in smaller organizations that have less hierarchical organizational structures. Kramer and Schmalenberg (2003) emphasized that nursing autonomy must have something to do with bureaucracy and hospital size. Many of the nurses in their qualitative study emphasized that as their organizations merged and became bigger, they perceived that they lost their autonomy (Kramer & Schmalenberg). It would be expected that smaller hospital

organizations located in rural communities would have fewer RNs on staff and fewer physicians on-site than larger urban settings. This would likely mean that there would be a flatter hierarchical structure present in smaller hospital settings, which would result in more independent, and autonomous practice opportunities for RNs working within these smaller organizational settings. Kanter pointed out that having the chance to engage in non-routine work, to show independent judgment, to take risks and become well known within the work environment are all less available in larger organizations. These activities and aspects of the work environment would more likely be present within smaller organizations, and are known to improve individual access to power structures and generate more autonomy (Kanter). For the present study, rural RNs from the smaller hospital settings may have had less routine work, more opportunities to make independent judgments, and increased participation in risk taking behavior than their small urban counterparts. All of these factors may account for the higher satisfaction with autonomy that was found for the rural RNs from the smaller organizations when compared with the small urban RNs from the larger organizations.

Kanter (1993, 1977) also emphasized that in larger, more hierarchical organizations, individuals can become dependent on those who have more personal power and who control important contingencies (i.e. have more personal influence within organizations). In many larger, more complex hospital organizations, physicians may still maintain high levels of personal power and therefore RNs within the small urban settings may be more dependent on physicians to make the important decisions within the practice environment. This is congruent with Kanter

that those people who can keep individuals in a state of dependency would have the ability to render both cooperative planning and autonomous action impossible. This does not mean that small urban RNs have no access to power structures, but they may have to contend with numerous hierarchical levels as well as the resulting dependency problems that tend to occur within a larger organizational structure. Kanter emphasized that dependency is reduced in smaller organizations where people can work more independently and have greater decision-making latitude. It may be that RNs in the smaller hospital settings have decreased levels of organizational dependency on physicians, which they might obtain by accessing their own levels of personal power and by bypassing the hierarchy present in larger hospital settings. According to Kanter, as long as dependencies are more symmetrical or balanced, people can agree to cooperate rather then take advantage of each other's vulnerabilities. In effect, this would result in more social interchanges between professionals in smaller organizations, which would produce formal and immediate results (Kanter). These factors may account for the higher satisfaction with collaborative interaction between nurses and physicians that was found for the RNs in the smaller rural hospital settings when compared to the RNs working in the larger, small urban hospital settings.

The result of the content analysis of open-ended survey responses also supports the importance of both nursing autonomy and collaborative interactions between professionals within rural and small urban hospital settings. On average, there were more responses from the rural hospital RNs than from the small urban hospital RNs who expressed themes relating to having a level of autonomous

practice and team relationships with other health professionals as the most important aspects of their nursing positions. It is possible that rural hospital RNs have the unique opportunity to practice in more independent roles (autonomy) and as a result their knowledge and experience may be more highly regarded and respected by the physicians that they work with.

5.5.1.2 The Nature of Rural vs. Small Urban Nursing Practice

Related to organizational size, it may be possible that the nature of nursing practice may be different in the smaller rural hospitals when compared to the larger hospitals in the small urban communities. Coward et al. (1992) suggested that nurses in smaller hospitals do things differently than their counterparts in larger hospitals; that their hospital nursing positions are organized differently, time is spent on different tasks and interpersonal relationships with coworkers are also different. Hansen et al. (1990) suggested that rural nursing settings are culturally unique and are characterized by an approach to practice requiring a generalist perspective. The nursing culture and generalist perspective that are unique to rural nursing practice may have played a role in the higher satisfaction with autonomy and nurse-physician interaction that was observed for the RNs working in the smaller rural hospital settings. Bushy and Bushy (2001) emphasized that nurses in small rural hospitals must have a broad knowledge base and that they must practice as expert generalists. The importance of a generalist perspective and nursing expertise were both apparent in the open-ended themes of having "expert nursing knowledge" and a "broad scope of practice" for both rural and small urban participants. Kanter (1993, 1977) stressed that although the accumulation of power in an organization is closely tied to the

formal position that an individual attains within a hierarchy; having competence within this position is also imperative. Provision of care in smaller rural hospital settings would require that RNs practice with use of advanced assessment and judgment skills, as well rural RNs working in these environments would have the responsibility to ensure that they maintain high levels of nursing competency. In a study of rural RNs, Bushy and Banik (1991), found that the nurses who had the most variety in their nursing roles (generalist practice) had higher levels of work satisfaction than the nurses who worked in less diverse roles. The increased responsibility for rural RNs to practice in more advanced or expert generalist roles with high levels of nursing competency may in part account for the increased satisfaction with autonomy and nurse-physician interaction observed for the rural hospital RNs in the present study.

The importance of work variety and occupational performance are also relevant when addressing sources of power in organizations. Kanter (1993, 1977) emphasized that the extent to which a job is routinized fails to give any advantage to the person that is carrying out that specific task. The author continued that excellent performance on tasks where behavior is predictable or routine may be valued, but will not necessarily increase individual access to power structures. Although it is not possible to assess possible differences in the routine nature of the work between rural and small urban hospital settings, there may be differences in the nature of practice between the different sizes of hospitals. The small rural hospitals may require that individual RNs take on more leadership roles, and fulfill a diversity of practice roles that may not be expected of an RN that works in a larger hospital in a

small urban setting. These additional roles that are performed may not only give rural RNs the opportunity to practice with a higher level of autonomy, but may also make them more visible to other health care professionals. These autonomous nursing roles may have a positive effect on the level of recognition and respect that rural RNs are given, and may improve the collaborative interactions that occur between nurses and physicians. These factors may have had an influence on the higher satisfaction with autonomy and nurse-physician interaction that was observed for the rural acute care hospital RNs.

5.5.2 Measurement Issues

Although the proposed hypotheses for the present study were supported by the analyses conducted, the internal consistency reliability for the autonomy subscale requires further examination. As reported earlier, the modified version of Stamps' (1997) autonomy subscale for the present acute care sample resulted in a Cronbach's alpha of 0.58, which was substantially lower than expected. The low reliability for the acute care sample may have been related to the subscale items not being valid indicators of rural or small urban autonomous practice. Attention to other indicators of autonomous practice for rural and small urban may have been more accurately presented in the open-ended survey responses that were analyzed. It is difficult to detect what specific factors may have contributed to the lower alpha than expected, however, these issues must be addressed so that a conceptual understanding of nursing autonomy from the perspective of rural and small urban RNs can be developed.

One factor that may have influenced the internal consistency reliability findings for the present study is that Stamps' (1997) Index of Work Satisfaction (IWS) was adapted over time from the results of primarily urban nursing studies. As well, the results of the factor analysis of the first version of Stamps' IWS for the autonomy subscale had the lowest Cronbach's alpha of 0.69 when compared to the other IWS subscales (0.76-0.85) (Stamps, 1997). Of the rural studies that have used earlier versions of Stamps' IWS, most neglected to report the internal consistency of the specific subscales (Bushy & Banik, 1991; Stratton et al., 1995). The rural study conducted by Coward et al. (1992) used a modified version of Stamps IWS, which only included two items to make up the autonomy subscale. Of the two items included by Coward et al., one of the items referring to having direct control over work had a lower loading of 0.53 on that particular factor. For the present study, the use of a modified version of Stamps' (1997) autonomy subscale may not have included items that reflect an accurate description of autonomous practice for rural and small urban RNs. For this reason, use of this subscale should be carried out with caution in the future study of rural and small urban acute care RNs.

Another factor that may have had an impact on the internal consistency reliability for the autonomy subscale is that nursing autonomy is a complicated concept and is not easily measured by cross-sectional tools. As reported earlier in the conceptual issues related to professional nurse autonomy, this concept is lacking a concrete definition in all areas of nursing practice (Tranmer, 2005). This lack of concept clarification may have had an influence on the accurate measurement of rural and small urban nursing autonomy. Tranmer (2005) emphasized that control

over work, control over nursing practice, clinical autonomy and professional autonomy are all concepts that have been labeled autonomy and are measured with the same tools. The author continued that a standardized conceptualization of professional nurse autonomy does not exist, and it is difficult to isolate autonomy and autonomous behaviors from other confounding factors. Related to this issue is that a rural and small hospital conceptualization of professional nurse autonomy may be vastly different than the conceptualization of nurse autonomy in larger urban hospital settings. Andrews et al. (2005) found that for RNs working alone in rural and remote areas of Canada, greater decision-making latitude was a significant predictor of work satisfaction. Although rural and small urban RNs may work with some nursing colleagues, the nature of practice within these settings may be more reflective of the practice of RNs who work alone than the practice of RNs in large urban cores. Also, issues such as the importance of having decision-making latitude may be an aspect of rural and small urban autonomy that was not entirely reflected in Stamps' modified autonomy subscale. A rural and small urban RN perspective must be considered in order to comprehend what autonomous nursing practice entails within these settings, and to develop rural specific tools that more accurately measure nurse autonomy within these smaller settings.

It may be possible to start to develop a better understanding of rural and small urban RNs' perceptions of autonomy by examining the open-ended responses that related to autonomy in the thematic content analysis. This was a method used by Kramer and Schmalenberg (2003) to determine hospital staff RNs' concept of clinical autonomy, and to start to develop tools that more accurately measure this

concept. One item from Stamps' (1997) modified autonomy subscale referred to having too much responsibility and not enough authority. It appears that this item may reflect some of the concepts most important to rural and small urban RNs such as a preference for higher levels of responsibility and less authority being held over them. Rural and small urban autonomy responses reflect that they prefer to make a lot of decisions without reliance on physicians and others in the organization and RNs favor being the first line of diagnosis and treatment to patients. A second and third item on the modified version of the autonomy subscale refers to having a great deal of independence being required of the individual and having supervisory support to make important decisions. These items may not be as relevant for nurses who practice in rural and small urban hospital settings, because the requirement to be independent and make independent decisions may be a natural characteristic of their position in the first place. It may be more appropriate to develop a rural specific tool that includes items that refer to aspects of using expert nursing judgment as part of their nursing position. The importance of having a high level of nursing competence, skill, and expertise to make independent decisions was reflected numerous times in the open-ended survey responses related to autonomy for both the rural and small urban participants.

The Stamps' autonomy subscale also included a fourth item that referred to the individual being frustrated because all of their activities seem programmed. Again, when this item is compared with the open-ended responses, a prominent theme that emerged that may relate to autonomy is the broad scope of practice required of rural and small urban RNs. In a rural or small urban hospital

environment where a generalist level of practice is expected, it may be that nursing activities would rarely be considered programmed. The natural versatility that is required of these RNs may make an item related to the programmed nature of nursing activities outdated. Finally the last item that was included in the modified version of Stamps' autonomy subscale was the question of whether nurses are sometimes required to do things on the job that are against their better professional nursing judgment. In general this item may need to be revisited due to the possible misinterpretation of the question being asked. Many RNs may not have an adequate understanding of what some of these "things" are. They may perceive that these "things" that are against their professional nursing judgment are activities that may harm their patients or are against their standards of nursing practice. For most RNs in acute care practice this notion may be considered unethical and for this reason many might respond that they would not do things against their better profession nursing judgment. It is possible that this question would not be interpreted as relating to their level of autonomy in practice. The item in question may be considered archaic in nature by today's standards, and it is possible that this concept may have been more relevant at the time the subscale was first developed. The results of this study suggest that a modified version of Stamps' IWS autonomy subscale should be used with caution in measuring the autonomy of rural and small urban acute care RNs. Further conceptualization of professional autonomy for rural and small urban RNs is necessary. Kramer and Schmalenberg's (2003) qualitative examination of the definitions and descriptions of autonomy from the perspective of hospital staff RNs is one method that could be used to develop a more

comprehensive understanding of how to measure this concept from a rural and/or small urban RN perspective.

5.6 Policy Implications

The aging workforce of rural and small urban RNs presents a multidisciplinary challenge for the recruitment and retention of rural and small urban hospital nursing professionals. It has been suggested that the issue of early retirement of the first wave of Baby Boomers is already affecting the supply of members from many professional groups including nurses (O'Brien-Pallas, Duffield, & Alksnis, 2004). The matter of early retirement in rural and small urban areas of Canada may be more of an issue due to the fact that an adequate supply of younger RN replacements may not exist in these isolated areas. It has been estimated that by 2006, Canada is projected to lose the equivalent of 13% of the 2001 nursing workforce through retirement at age 65 (O'Brien-Pallas, Alksnis, Wang, Birch, & Tomblin Murphy, 2003). Due to the fact that many health professional retire before the age of 65, these losses are projected to increase to 28% of the 2001 nursing workforce if nurses choose to retire at the age of 55 (CIHI, 2005b). This projected nursing shortage is predicted to have a potentially dramatic effect in the rural regions of Canada (Kulig et al., 2003). It is difficult to predict what impact these losses to the nursing workforce may have on the provision of quality healthcare in the rural areas of Canada. However, it can only be assumed that the significant decreases in the supply of these RNs would negatively affect the rural access to quality care and therefore this issue must be addressed at a national level. Studies that have focused on rural samples of hospital RNs have consistently found that aspects of work

satisfaction such as higher autonomy and collaborative interaction between nurses and physicians are important for the retention of rural RNs (Hanson et al., 1990; Hegney et al., 2002; Pan et al., 1995). National recognition and support of these aspects related to quality work environments may actually help retain those RNs who are in the higher age categories. O'Brien-Pallas et al. (2004) emphasized that the factors that foster job enrichment and increase challenges in a nursing position may be significant in the retention of nurses who are closer to retirement age. The increased challenge that autonomous nursing practice and more collaborative nurse-physician interaction can provide to the aging nursing workforce, is a retention strategy that should be focused on within rural and small urban acute care environments.

Another challenge that exists at a national level is the need for a new generation of rural and small urban acute care RNs to replace the nursing workforce that will be lost in these areas due to retirement and migration to other practice areas. Increasing the enrollment in nursing schools is one strategy that is being utilized in order to ensure that an adequate supply of qualified RNs are available to counteract the present nursing shortage in Canada (ACHHR, 2002). Unfortunately, an increase in the number of RNs who have been educated mainly within urban areas may not improve the supply of RNs who are prepared to work in the rural and small urban areas of Canada. Although increasing enrollment is important, the content of nursing education programs must also reflect and promote the opportunities that are available in rural and small urban acute care practice. Policy development at a national level could ensure that nursing students have adequate

opportunities to enhance their nursing education with rural and small urban acute care experiences. In an Australian study that compared rural and metropolitan clinical experiences for nursing students, it was found that the students who had rural clinical placements rated themselves as more confident, competent and organized than the students that had strictly urban placements (Edwards, Smith, Courtney, Finlayson, & Chapman, 2004). The choice of rural and small urban acute care practicum placements would introduce nursing students to the diverse and unique nature of practice that rural nursing has to offer as well as enhance their level of nursing competence and organizational skill. Recruitment efforts must focus primarily on the aspects that are characteristic of quality work environments. These recruitment efforts may be more successful with the new nursing graduates who have already experienced the higher levels of autonomy and improved working relationships between nurses and physicians that are present in rural acute care settings.

The development of rural education standards and improving access to continuing education for nurses who practice in rural areas is another challenge that should be addressed at a national level. Kulig et al.'s (2003) analysis of policy documents found that there is a paucity of literature available on rural specific education that is available to RNs that would enhance their ability to work in the rural regions of Canada. They concluded that although several universities prepare students for rural and remote practice, no documents were found that evaluated the programs that were available (Kulig et al.). In order to address some of these issues, national policy based strategies must focus on the development of rural accreditation

standards. This may include development of university level education programs at a national level that are rural specific and are primarily based upon rural nursing theory. As well, these programs should be evaluated through ongoing research and the programs should be made accessible to rural and small urban RNs throughout Canada. The opportunity for rural specific education and rural specialty accreditation may enhance the ability of RNs to practice with a higher level of expertise and autonomy, as well as develop higher levels of confidence in working collaboratively with rural physicians.

Policy makers and nursing leaders must also be willing to address issues that are related to the power differentials that may be present within larger hospital organizations. Attention to organizational theory such as Kanter's (1977, 1993) structure of power in organizations can assist larger hospital settings in examining their organizational structure, and the effect that numerous hierarchical levels may have on individual RN's job or work satisfaction. The higher level of autonomy and nurse-physician interaction that were noted for the smaller rural hospital settings in the present study may have been related to the flatter hierarchical structure that would be present within rural hospitals. Policy makers and hospital administration must recognize that power differentials are serious issues and are related to the perceived quality of the nursing work environment. These issues must be examined within small urban hospital settings in order to improve the collaboration between health professionals, increase the level of autonomous practice, and improve the work environment in general.

The idea that the nature of rural and small urban nursing practice is different than the nature of practice in larger urban areas, must also be acknowledged. Policy development related to the recruitment and retention of rural and small urban RNs must focus on the aspects of nursing worklife that these RNs consider most important to their practice. The nature of rural nursing practice was recently addressed in a national discussion paper that emphasized the primary importance of rural nurses having a broad knowledge base and functioning more autonomously in expanded nursing roles (CNA, 2004). These factors that are characteristic of rural nursing practice were also reflected in the present study. The themes that emerged through the content analysis reflected the importance of quality patient centered care, a high level of nursing expertise, a broad scope of practice, autonomous nursing, and interprofessional interactions in rural and small urban acute care practice. These characteristics that are distinct to rural and small urban acute care settings have added to the comprehension of the nature of rural nursing practice within Canada. Knowledge of these aspects could help structure national policy development with a focus on informing the public, nursing organizations and other health professionals about the specialty of rural nursing practice. Rural policy development could also enhance the organization of specialty rural nursing groups within professional nursing organizations at the provincial level. These specialty-nursing groups could develop recommendations related to rural research, standards of practice, accreditation, and education. In effect, this would make rural and small urban nursing more visible as a specialty and improve their working conditions, which could also improve the recruitment of nurses to these areas.

Policy collaboration within organizations and the creation of multidisciplinary committees could improve collegial interaction and draw RNs to areas that support the characteristics of professional nursing practice. Magnet hospitals are known to weather nursing shortages based upon their ability to attract and retain skilled RNs. A system of autonomous operation at the unit level, as well as systematic involvement by unit RNs in nursing and department-wide governance issues are some of the characteristics of professional nursing practice that magnet hospitals are known to promote (Havens & Aiken, 1999; Upenieks, 2003b). In a sense, the activities that enhance professional nursing practice within magnet hospitals have resulted in numerous leadership opportunities for front-line RNs. Aiken et al. (2001) stressed that in the larger hospital environments the opportunity for front-line nurse leadership roles has been reduced. However, rural and small urban RNs in smaller hospitals may have more opportunity available to take on leadership roles at the front-line, and work toward the creation of quality nursing environments. The establishment of national policy that encourages positive working relationships between nurses and physicians in the rural and small urban areas of Canada may be the first step in the promotion of increased nursing leadership roles. Chaboyer et al. (1999) suggested that more cooperative relationships between nurses and physicians enhances nurses' access to additional job satisfiers such as decision-making input, enhanced autonomy, respect and authority. RNs must be encouraged and allowed to be involved in the decision-making process along with hospital administrators, physicians and policy makers. Baumann et al. (2001) suggested that if RNs have limited input into aspects of

patient care and feel that their expertise is not respected, this in turn lowers their commitment to their employers. Retention strategies that are focused on rural RNs must respect their specialty skill and expert nursing knowledge. Involvement of rural acute care RNs is especially important in decisions related to patient safety, quality of patient care and the organization of nursing care within the hospital organization.

Administrators and policy makers should place the highest priority on strategies that improve the rural nursing work environment. Themes that related to the importance of having improved working conditions also emerged in the content analysis of both the rural and small urban RNs' open-ended survey data. The common nursing issues that were raised included concerns with being overworked and undervalued, being understaffed, having increased patient volumes and higher levels of patient acuity, and considering leaving the profession due to job dissatisfaction. Part of the responsibility in dealing with these ongoing nursing issues includes national monitoring of the working conditions of rural and small urban RNs. In addition to these actions, rural communities in Canada must develop strategies that enhance and contribute to rural community development. A subsequent theme that emerged through the content analysis of the rural acute care RN responses was the importance of nursing in a rural community. Main ideas expressed were the importance of making a difference within their own community, providing local access to health services, and having a personal connection with and knowing the people that they were caring for on a daily basis.

5.7 Study Limitations

Although this study adds to the limited knowledge base on the nature of nursing practice of rural and small urban acute care RNs in Canada, this research has limitations particularly related to the constraints of conducting a secondary analysis of an existing dataset.

1. One limitation observed for the present study was the inability to accurately define the differences in the size of hospital organization between the rural and small urban communities. Assumptions were made that smaller hospitals would be located in smaller rural communities, and larger hospitals in larger communities, which is supported by the literature (Stratton et al., 1998). The study results regarding the comparison of the number of workplace RNs between rural and small urban hospital settings also supports this assumption. However, no original survey data exists that can conclusively verify these inferences.
2. For the present study, it has been inferred theoretically that a relationship exists between the size of the hospital organization and the differing levels of autonomy and nurse-physician interaction noted. Unfortunately, due to the cross-sectional nature of the original study design, the ability to determine causality cannot be adequately satisfied and findings should be viewed with caution.
3. Due to the sampling frame of "rural postal code of residence", the small urban acute care RNs that were identified in the present study may be more representative of rural acute care RNs than of urban acute care RNs. For this

reason the findings of this study would not be generalizable when making comparisons between populations of rural and urban acute care RNs.

4. The low internal consistency reliability for the Autonomy subscale (Cronbach's alpha 0.58) for the present sample of acute care RNs is a limitation that was noted and suggests that future measurement work relevant to these settings (i.e., rural and remote acute care nursing environments) is necessary.
5. With regard to the qualitative data analysis there may be some concern that the French-language translation of the open-ended responses into English-language may have had an effect on the content analysis of the open-ended survey data. While the French version of the questionnaire had extensive content validity checks in the pilot study (Stewart et al., 2005), a sole translator performed the data entry of French-language responses into English due to feasibility issues.
6. Finally, a minor discrepancy was observed between the questionnaire categories and the definition of "rural and small town" (du Plessis et al., 2001). The questionnaire category that was designated rural for this study included those with a community population of up to and including 10,000. A precise representation of "rural and small town" would have a community population category up to and including 9,999 according to the Statistics Canada definition (du Plessis et al.).

5.8 Suggestions for Future Research

The accumulation of evidence regarding the nature of nursing practice in the rural regions of Canada must be continued. The following suggestions for future research were developed from the results of the present study.

1. Further research is necessary to develop a rural conceptualization of professional nurse autonomy. As well, rural specific tools that measure levels of autonomous practice must be developed through research that is conducted with samples of RNs who work in rural practice settings. How do rural and small urban RNs define and describe professional autonomy? Is the rural conceptualization of professional nursing autonomy different from an urban conceptualization of professional nursing autonomy?
2. Further study is needed to determine if aspects of quality work environments such as autonomy and nurse-physician interaction are related to the recruitment and retention of rural and small urban RNs. Are rural nurses drawn to and remain in practice settings that encourage or require RNs to practice more autonomously? Are rural nurses drawn to and remain in practice settings that have a reputation of strong team relationships between nurses and physicians?
3. An examination of the organizational structure of smaller rural hospital organizations should be conducted. Further study is needed to determine whether flatter hierarchical structures are present in rural hospital organizations. What works well within smaller hospital organizations? What

can larger hospital organizations learn from these smaller hospital organizations?

4. Further research is required to develop a conceptualization of the specialty of rural nursing practice in acute care settings. The concept of "expert generalist" must be acknowledged and explored further. Study into the nature of rural nursing practice should work to determine what specific skills, knowledge, scope of practice and experiences are indicative of an expert generalist. As well, further study could determine if this concept is also related to nursing autonomy and nurse-physician collaborative interaction in rural acute care settings.
5. Finally, more research is necessary at a national level that explores possible differences in nursing autonomy and nurse-physician collaborative interaction for RNs working in rural vs. large urban acute care settings. This type of research could strengthen the evidence that supports that the nature of nursing practice is different between rural and urban acute care RNs in Canada. As well this type of study could determine more conclusively what factors may contribute to these possible differences.

5.9 Conclusion

The results of this study have added to the limited knowledge on the nature of acute care nursing practice in rural and small urban hospital settings in Canada. Similar to the total population of Canadian RNs, it has been established that the rural and small urban acute care RNs of Canada are an aging nursing workforce. The reality of this aging workforce raises many concerns related to the ongoing

recruitment and retention of qualified RNs, as well as the sustainability of quality health care in the rural and small urban regions of Canada. The quality of nurses' work environments must be addressed if rural and small urban hospital settings are to maintain their nursing workforce in the future.

As outlined previously, quality nursing work environments have been consistently linked to having more autonomous practice and more collaboration between nurses and physicians. As well, these characteristics have been linked to RNs' work satisfaction and nursing recruitment and retention. The results of this study suggest that RNs who practice in smaller, rural hospital organizations have higher levels of nursing autonomy and more collaborative relationships between nurses and physicians. This trend of higher autonomy and nurse-physician interaction occurring in the rural acute care settings must be acknowledged in Canada, and possible reasons for these differences must be explored further. The potential influence that the size of an organization has on the differences in autonomy and nurse-physician interaction that were observed must be addressed at a national level. Organizational size may not only have an influence on the structure of power that is present within hospital settings, but may also have an effect on the nature of nursing practice that is integrated by hospital organizations that differ in size. The specialty of rural and small urban nursing practice requires the use of expert nursing knowledge and judgment, a broad scope of practice, and an expert generalist approach. The conceptualization of nursing autonomy for rural and small urban RNs must take these specialty characteristics into account. The commitment to the recognition and development of the advanced nursing skills necessary for

rural and small urban acute care practice will ensure that future RNs have continued access to quality nursing environments.

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Appendix A:
Nursing in Rural and Remote Canada: A National Survey

Nursing in Rural and Remote Canada

A National Survey

Confidential when completed

Rural and Remote Nursing Study
Box 92, Royal University Hospital
103 Hospital Drive
Saskatoon, Saskatchewan
Canada S7N 0W8

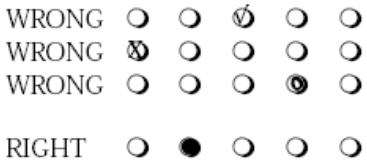
Tel: (306) 966-6260
Fax: (306) 966-8774

Sequence No:

DIRECTIONS FOR MARKING ANSWERS

- Use pencil only - provided. No pens.
- Make the marks heavy and dark.
- Make sure the mark fills the circle.
- If you make a mistake or change your mind, erase carefully.
- Mark only one circle for each question unless directed otherwise.
- Write comments on the space provided or on a separate page.

EXAMPLES



INSTRUCTIONS

Read all questions carefully. Be as honest as you can when you answer the questions.

INTRODUCTION

This survey represents a vital first step to examine the nature of nursing practice and the experiences of registered nurses in rural and remote Canada.

The findings of the study will help identify areas of priority for organizational and policy support with respect to the recruitment, retention and education of registered nurses (RNs) in rural and remote Canada. Hopefully, the survey will contribute to improving the work environment for nurses in such settings.

The study is national in scope and is a joint undertaking of researchers and nurses at the Universities of Northern British Columbia, Saskatchewan, Lethbridge, Laurentian, Calgary, Lakehead, Laval, Dalhousie, Queen's, and Manitoba.

It is funded by a research grant from the Canadian Health Services Research Foundation, Nursing Research Fund, the Michael Smith Foundation for Health Research (BC), the Alberta Heritage Foundation for Medical Research, Saskatchewan Economic and Cooperative Development, Ontario Ministry of Health and Long-Term Care, Nova Scotia Health Research Foundation, Nunavut Department of Health and Social Services, the British Columbia Rural and Remote Health Research Institute based in UNBC, and the provincial and territorial nursing associations.

Please answer all questions. Most of the questions have been designed so you can give your answers quickly and easily.

Answer the questions in relation to the nursing position in which you work the most and the community in which you work the most.

Your help is greatly appreciated.

A. Basic Demographic Information

1) Province or territory of residence .....
- ❍ Newfoundland
- ❍ Prince Edward Island
- ❍ Nova Scotia
- ❍ New Brunswick
- ❍ Quebec
- ❍ Ontario
- ❍ Manitoba
- ❍ Saskatchewan
- ❍ Alberta
- ❍ British Columbia
- ❍ Yukon
- ❍ Northwest Territories
- ❍ Nunavut

2) Gender .....
- ❍ Female
- ❍ Male

3) Year of birth ..... 19 __ __

4) Educational background

	Mark all that apply		Year Received	Province or Country Credential Received (eg. Saskatchewan)
Diploma in Nursing	❍	>	_____	_____
Bachelor's Degree in Nursing	❍	>	_____	_____
Bachelor's Degree in Another Field	❍	>	_____	_____
Masters Degree in Nursing	❍	>	_____	_____
Masters Degree in Another Field	❍	>	_____	_____
Doctoral Degree in Nursing	❍	>	_____	_____
Doctoral Degree in Another Field	❍	>	_____	_____
Advanced Nurse Specialist / Nurse Practitioner Diploma	❍	>	_____	_____
Other ..... (Please Specify) _____	❍	>	_____	_____

5) What year were you first licensed to practice as an RN in Canada? _____

6) a. In what province(s) or territory(ies) were you *first* licensed as an RN? _____

b. In what province(s) or territory(ies) are you *currently* licensed? _____

c. How many years have you been licensed to practice as an RN? _____

B. Employment

1) Employment status .....
- ❍ Employed in nursing
- ❍ Employed in other than nursing - seeking employment in nursing
- ❍ Employed in other than nursing - not seeking employment in nursing
- ❍ Not employed and seeking employment in nursing
- ❍ Not employed and not seeking employment in nursing
- ❍ Not stated

2) Do you have more than one nursing position? .....
- ❍ Yes
- ❍ No

3) Nursing employment status (Mark all that apply) .....
- ❍ Full-time/Permanent
- ❍ Part-time/Permanent
- ❍ Job share
- ❍ Casual
- ❍ Contract/Term
- ❍ Not employed

4) Work setting (Mark most appropriate category - choose only one) .....
- ❍ General Hospital
- ❍ Mental health centre
- ❍ Nursing station (outpost/nurse clinic)
- ❍ Rehabilitation/convalescent centre
- ❍ Nursing home/Long term care facility
- ❍ Home care
- ❍ Community health agency
- ❍ Business - industry occupational health
- ❍ Private nursing agency/private duty
- ❍ Integrated facility (acute and long-term care)
- ❍ Self-employed
- ❍ Physician's office/family practice unit
- ❍ Educational institution
- ❍ Association/government
- ❍ Other (specify) _____

5) Hours worked: In the last year, have you worked in nursing?

- ❍ Full-time hours
- ❍ More than full-time hours
- ❍ Less than full-time hours

6) a) Area of current practice (Mark *all* that apply)

- 1 Acute care ❍
- 2 Long term care ❍
- 3 Community health ❍
- 4 Home care ❍
- 5 Primary care ❍
- 6 Administration ❍
- 7 Education ❍
- 8 Research ❍
- 9 Other ❍

(please specify) _____

b) In which of the above practice areas (Question 6a) do you spend most of your time? (Mark only *one*)

❍ 1 ❍ 2 ❍ 3 ❍ 4 ❍ 5 ❍ 6 ❍ 7 ❍ 8 ❍ 9

7) Current position

- ❍ Chief nursing officer/director
- ❍ Assistant/associate director
- ❍ Supervisor
- ❍ Program Coordinator
- ❍ Head nurse/unit manager
- ❍ Staff nurse
- ❍ Community health nurse
- ❍ Office nurse
- ❍ Occupational health nurse
- ❍ Clinical nurse specialist
- ❍ Nurse Practitioner
- ❍ Educator
- ❍ Researcher
- ❍ Consultant
- ❍ Other (please specify) _____

C. COMMUNITY/AGENCY

1) What is your *work* postal code? (first four characters to ensure confidentiality) __ __ __ __ X X

2) How far is your current *work community* from a major centre of 50,000 or greater population?

_____ miles or _____ kilometres

3) Do you consider your workplace remote? ❍ Yes ❍ No

4) Do you consider your workplace rural? ❍ Yes ❍ No

[ANSWER THESE QUESTIONS IN TERMS OF THE RURAL/REMOTE COMMUNITY IN WHICH YOU WORK THE MOST.]

5) Are you currently working in a community only accessible by plane?

❍ Yes ❍ No (Skip to Question 6)

How frequent are scheduled air flights into the community? (Mark one)

❍ Once per day or more
❍ Once per week or more
❍ Once per month or more
❍ No scheduled flights - charter only

6) What type of *ownership* best describes the facility in which you work the most? (Mark one)

❍ Private for profit facility
❍ Private non-profit / not for profit
❍ Local Health Board
❍ Municipal government
❍ Provincial/territorial government
❍ Tribal Council/band
❍ Federal government
❍ Don't know
❍ Other (please specify) _____

7) Do you feel the community is supportive of the health agency you work for?

❍ Very supportive
❍ Somewhat supportive
❍ Neutral
❍ Unsupportive
❍ Very unsupportive

8) At your primary workplace how many RN positions (in full time equivalents) are there including yourself?

Number _____

9) Are nurses the first contact for health care services in your area?

❍ Yes ❍ No

10) Do you use an interpreter to assist you in your work?

❍ Yes ❍ No

11) Which of the following **health services** are available on site in your work community? (Mark all that apply)

	Available Daily	Available Weekly	Available Monthly	Available Every 2 to 6 months	Available Every 7 to 12 months	Not Available
Dental	❍	❍	❍	❍	❍	❍
Physiotherapist	❍	❍	❍	❍	❍	❍
Home care	❍	❍	❍	❍	❍	❍
Hospital	❍	❍	❍	❍	❍	❍
Family physician services	❍	❍	❍	❍	❍	❍
Public health services	❍	❍	❍	❍	❍	❍
Pharmacy services	❍	❍	❍	❍	❍	❍
Occupational Therapy	❍	❍	❍	❍	❍	❍
Mental Health services	❍	❍	❍	❍	❍	❍
Specialist - medical	❍	❍	❍	❍	❍	❍
Nutritionist	❍	❍	❍	❍	❍	❍
Alternative health practitioner	❍	❍	❍	❍	❍	❍

12) Are there family physicians living in the community in which you work the most?

❍ Yes ❍ No

How many? Number _____

13) Do medical specialists (other than family physicians) live in your community?

❍ Yes ❍ No

14) In general how long have the physicians resided in the community? (Mark all that apply)

	# of Physicians
❍ Between 1 and 2 years	_____
❍ Between 2 to 5 years	_____
❍ Between 5 to 10 years	_____
❍ More than 10 years	_____
❍ Don't know	_____

15) Do you work with **student** ....

	Yes	No
physicians	❍	❍
nurses	❍	❍
physiotherapists	❍	❍
other (please specify) _____	❍	❍

16) Do you have direct access in your workplace via the computer to other information sources such as those on the Internet for your use in nursing practice? (This computer usage is not to be confused with using a unit computer for normal client care.)

- ❍ Yes
- ❍ No
- ❍ Don't know

17) Is 'Telehealth' available at your work site? That is the use of advanced telecommunication technologies to exchange health information and provide health care services across geographic and time barriers.

- ❍ Yes
- ❍ No
- ❍ Don't know

How satisfied are you with the availability and use of Telehealth in your area?

Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied
❍	❍	❍	❍

18) Briefly describe any unique characteristics of the clients that you serve, e.g. ethnicity, age, gender, language, poverty, etc.

1. _____
2. _____
3. _____
4. _____
5. _____

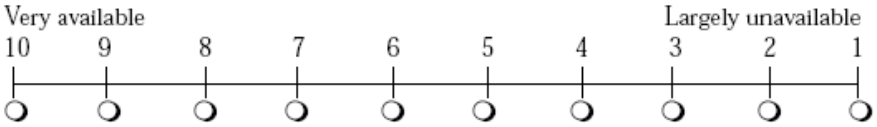
19) Do you have a support network of colleagues who provide consultation and/or professional support?

❍ Yes ❍ No

20) What disciplines are represented in your consultation/professional support network?

❍ Nursing
❍ Medicine (family practice, specialists)
❍ Other health professionals (e.g., pharmacy, physical therapy, dentistry)
❍ Other non-health
❍ Don't have one

21) Are colleagues available to you for consultation when you need them? Indicate availability by filling the circle on the 10-point scale below.



22) On what basis does this contact take place? (Mark all that apply)

❍ Face-to-face
❍ Telephone
❍ E-mail

23) How far is it to the closest *basic referral centre* - that is the closest community with basic specialty services such as general internal medicine, general surgery, ophthamology, orthopedic surgery and radiology?

_____ kms or _____ miles

24) How far is it to the closest *advanced referral centre* - that is, a major metropolitan centre with sub-specialty services such as cardiac surgery, neurosurgery, pediatric surgery, radiation oncology and hematology?

_____ kms or _____ miles

25) How long have you been *employed by your primary agency/institution(s)*?

❍ Less than 2 years
❍ 2 - 5 years
❍ 6 -9 years
❍ 10 - 14 years
❍ 15 - 19 years
❍ 20 years or more

26) How long have you held *your current primary position*?

- ❍ Less than 2 years
- ❍ 2 - 5 years
- ❍ 6 - 9 years
- ❍ 10 - 14 years
- ❍ 15 - 19 years
- ❍ 20 years or more

27) Would you say:

	Agree	*Agree somewhat*	*Disagree somewhat*	*Disagree*	*Not applicable*
a. I am happy with the community in which I work.	❍	❍	❍	❍	❍
b. I am frequently recognized in public by clients.	❍	❍	❍	❍	❍
c. I am bothered when I am recognized in public by clients.	❍	❍	❍	❍	❍
d. When I'm not at work, people frequently ask me for professional advice.	❍	❍	❍	❍	❍
e. I am bothered when people ask for professional advice when I'm not at work.	❍	❍	❍	❍	❍

28) What is the population of the place in which you *live*?

- ❍ Farm/acreage
- ❍ 200 or less
- ❍ 201 - 500
- ❍ 501 - 1,000
- ❍ 1,001 - 2,500
- ❍ 2,501 - 5,000
- ❍ 5,001 - 10,000
- ❍ 10,001 - 20,000
- ❍ 20,001 - 50,000
- ❍ 50,001 - 75,000
- ❍ Over 75,000

29) What is the population of the village/town/city in which you *work*?

- ❍ 200 or less
- ❍ 201 - 500
- ❍ 501 - 1,000
- ❍ 1,001 - 2,500
- ❍ 2,501 - 5,000
- ❍ 5,001 - 10,000
- ❍ 10,001 - 20,000
- ❍ 20,001 - 50,000
- ❍ 50,001 - 75,000
- ❍ Over 75,000

30) What is your home postal code? (first four characters to ensure confidentiality) __ __ __ __ X X

31) How satisfied are you with the following aspects of your home community (where you live) at this time? (Rate each dimension on a five-point scale from 'not satisfied' to 'very satisfied'.)

	Not satisfied 1	2	3	4	Very satisfied 5
a. Friendly community	❍	❍	❍	❍	❍
b. Trusting community	❍	❍	❍	❍	❍
c. Social/recreational opportunities	❍	❍	❍	❍	❍
d. Friends	❍	❍	❍	❍	❍
e. Quality of schools (K-12)	❍	❍	❍	❍	❍
f. Safety	❍	❍	❍	❍	❍
g. Ability to stay current in your practice	❍	❍	❍	❍	❍
h. Level of anonymity	❍	❍	❍	❍	❍
i. Consulted on work issues outside of work	❍	❍	❍	❍	❍
j. Size of community	❍	❍	❍	❍	❍
k. Distance away from major centre	❍	❍	❍	❍	❍
l. Overall community satisfaction	❍	❍	❍	❍	❍

D. Hours of Work/Stability/Benefits

1) What hours do you work most often?

- ❍ Days (8 hour)
- ❍ Days (12 hour)
- ❍ Evenings (8 hour)
- ❍ Nights (8 hour)
- ❍ Nights (12 hour)
- ❍ Rotating (8 hour)
- ❍ Rotating (12 hour)
- ❍ Other (please specify) _____

Scheduling

2) In my work situation:

	Agree	*Agree somewhat*	*Disagree somewhat*	*Disagree*	*Not applicable*
a. My work schedule is satisfactory	❍	❍	❍	❍	❍
b. I am satisfied with the number of hours I work	❍	❍	❍	❍	❍
c. I am satisfied with the flexibility in overall scheduling	❍	❍	❍	❍	❍

	Agree	Agree somewhat	Disgree somewhat	Disagree	Not applicable
d. I am satisfied with the shifts I work.	❍	❍	❍	❍	❍
e. I am satisfied with my rotation.	❍	❍	❍	❍	❍
f. I am satisfied with the flexibility in scheduling weekends/days off.	❍	❍	❍	❍	❍
g. I am satisfied with the amount of overtime I'm required to work.	❍	❍	❍	❍	❍

Would you prefer to work more or less overtime?

- ❍ More
- ❍ About the same
- ❍ Less

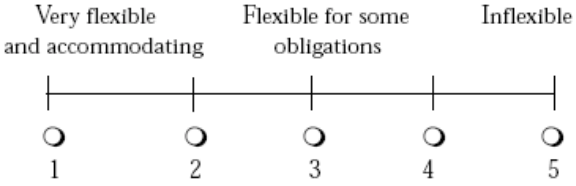
3) Are you required to be on call for your work?

- ❍ Yes > How many hours per month? _____
- ❍ No

Comment: _____

_____

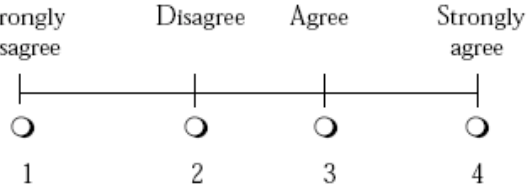
4) Does your work situation allow you flexibility in responding to family obligations? Indicate by filling in circle on the 5-point scale below your work place's flexibility.



5) How steady is your work? (Mark *one*)

- ❍ Regular and steady
- ❍ Seasonal
- ❍ Frequent layoffs
- ❍ Both seasonal and frequent layoffs
- ❍ Other (please specify) _____

6) My job security is good.



7) In your main area of work:

a. If you are employed on a casual basis (i.e., non-permanent), is this by your choice?

- ❍ Yes
- ❍ No (Skip to Question 8)
- ❍ Not applicable (Skip to Question 8)

b. How long have you been casual? _____ Years _____ Months

c. Have you been laid off in the last 5 years? ❍ Yes ❍ No (Skip to Question 8)

d. How many times were you laid off in the last 5 years? _____ times

e. Were you rehired by the same organization? ❍ Yes ❍ No

8) Have you changed organizations or positions in the last 5 years *due to downsizing*?

- ❍ Yes, my choice
- ❍ Yes, required by organization
- ❍ No

9) How adequate was the orientation provided by your current organization to meet your learning needs?

- ❍ Not at all adequate
- ❍ Somewhat adequate
- ❍ Mostly adequate
- ❍ Very adequate

10) How many hours per month do you spend travelling *to* your main nursing job?

_____ Hours _____ Minutes ❍ Not applicable

11) In a typical day how much time do you spend travelling *as part* of your job?

_____ Hours _____ Minutes ❍ Not applicable

12) What is the impact of work-related travel on your life?

Travel to work: _____

_____

_____

Travel for work: _____

_____

_____

Benefits

13) *Which benefits do you currently receive from your employer/contractor?*

14) *Indicate level of importance to you.*

	Yes	No		Very important ↓	Important ↓	Neutral ↓	Unimportant ↓	Very unimportant ↓
a) Extended health insurance	❍	❍	→	❍	❍	❍	❍	❍
b) Dental insurance	❍	❍	→	❍	❍	❍	❍	❍
c) Daycare (child/elder)	❍	❍	→	❍	❍	❍	❍	❍
d) Vacation/holidays	❍	❍	→	❍	❍	❍	❍	❍
e) Sick/maternity leave	❍	❍	→	❍	❍	❍	❍	❍
f) Tuition reimbursement	❍	❍	→	❍	❍	❍	❍	❍
g) Isolation allowance	❍	❍	→	❍	❍	❍	❍	❍
h) Banked time	❍	❍	→	❍	❍	❍	❍	❍
i) Payment of provincial/territorial health care premium (if not applicable, leave blank)	❍	❍	→	❍	❍	❍	❍	❍
j) Continuing education support	❍	❍	→	❍	❍	❍	❍	❍
k) Travel and sustenance support to facilitate continuing education	❍	❍	→	❍	❍	❍	❍	❍
l) Professional registration fee	❍	❍	→	❍	❍	❍	❍	❍
m) Family day leave	❍	❍	→	❍	❍	❍	❍	❍
n) Pension benefits	❍	❍	→	❍	❍	❍	❍	❍

		Yes	No		Very important ↓	Important ↓	Neutral ↓	Unimportant ↓	Very unimportant ↓
o)	Salary continuance plan for chronic illness ...	❍	❍	→	❍	❍	❍	❍	❍
p)	Employer's vehicle for work related travel	❍	❍	→	❍	❍	❍	❍	❍
q)	Cell/mobile phone	❍	❍	→	❍	❍	❍	❍	❍
r)	Other (please specify)	❍	❍	→	❍	❍	❍	❍	❍

E. Nursing Practice

1) Do you regularly perform any of the following nursing procedures as part of your *current nursing practice*? Mark *all* that apply.

		Yes	No
a.	Pre-natal care	❍	❍
b.	Management of labor	❍	❍
c.	Management of delivery	❍	❍
d.	Immunizations	❍	❍
e.	Post-natal care	❍	❍
f.	Suturing	❍	❍
g.	Taking x-rays	❍	❍
h.	Dispensing (not administrating) medication	❍	❍
i.	Prescribing medication	❍	❍
j.	Audiometry	❍	❍
k.	Refraction	❍	❍
l.	Casting/splinting	❍	❍
m.	Ordering diagnostic tests	❍	❍
n.	Performing diagnostic tests	❍	❍
o.	Interpreting diagnostic tests	❍	❍
p.	Pulmonary function testing	❍	❍
q.	Performing pap smears	❍	❍
r.	Joint injection / aspiration	❍	❍
s.	Needle aspiration (for diagnosis/biopsy)	❍	❍
t.	Culturing tissue samples	❍	❍
u.	Evacuating patients	❍	❍

	Yes	No
v. Direct referral to an allied health professional (e.g. physiotherapist)	❍	❍
w. Direct referral to a medical specialist	❍	❍
x. Pronouncing death	❍	❍
y. Other _____	❍	❍

_____

2) With respect to the above nursing procedures (Question E1) which, if any, have required certification by your employer? ❍ None

Item Letter	Description
_____	_____
_____	_____
_____	_____

3) Have you facilitated health promotion activities in your community?

❍ Yes ❍ No

Give an example: _____

_____

4) Are there nursing practice and decision-making skills that you perform on an advanced level in your area of practice? ❍ Yes ❍ No (Skip to Question 5)

Please explain: _____

_____

_____

5) Which of the following best describes your *average* day of practice? (Please mark all responses which you believe reflect your role)

- I am required to work with many different kinds of patients ..... ❍
- Nothing in my day is routine, the workload dictates my role ..... ❍
- I use protocols specific to advanced nursing practice ..... ❍
- I usually have one nursing role but am required to take on other roles depending on demand ..... ❍
- I think of my role as advanced nursing practice ..... ❍

F. Attitudes about Nursing

The following items represent statements about how satisfied you are with YOUR MAIN CURRENT NURSING POSITION. Please respond to each item. It may be difficult to fit your responses into the eight categories. In that case, select the category that *comes closest* to your response to the statement. It is very important that you give your *honest* opinion. Please do not go back and change any of your answers.

	Strongly agree	*Agree*	*Mildly or somewhat agree*	*Undecided*	*Mildly or somewhat disagree*	*Disagree*	*Strongly disagree*	*Not applicable*
1) My present salary is satisfactory.	❍	❍	❍	❍	❍	❍	❍	❍
2) The nursing personnel in this organization do not hesitate to pitch in and help one another out when things get in a rush.	❍	❍	❍	❍	❍	❍	❍	❍
3) Physicians in general cooperate with nursing staff at my organization.	❍	❍	❍	❍	❍	❍	❍	❍
4) New employees are not quickly made to feel at home in this organization	❍	❍	❍	❍	❍	❍	❍	❍
5) I have no doubt in my mind that what I do on my job is really important.	❍	❍	❍	❍	❍	❍	❍	❍
6) There is a great gap between the administration of this organization and the daily problems of the nursing service.	❍	❍	❍	❍	❍	❍	❍	❍
7) Considering what is expected of nursing personnel at this organization, the pay we get is reasonable.	❍	❍	❍	❍	❍	❍	❍	❍
8) A good deal of teamwork is present between various levels of nursing personnel in this organization	❍	❍	❍	❍	❍	❍	❍	❍
9) I have too much responsibility and not enough authority.	❍	❍	❍	❍	❍	❍	❍	❍
10) This organization offers opportunities for advancement/promotion.	❍	❍	❍	❍	❍	❍	❍	❍
11) There is a lot of teamwork between nurses and doctors at my organization.	❍	❍	❍	❍	❍	❍	❍	❍
12) The present rate of pay for nursing service personnel at this organization is not satisfactory.	❍	❍	❍	❍	❍	❍	❍	❍
13) The nursing personnel in this organization are not as friendly and outgoing as I would like.	❍	❍	❍	❍	❍	❍	❍	❍
14) There is ample opportunity for nursing staff to participate in the administrative decision-making process.	❍	❍	❍	❍	❍	❍	❍	❍
15) A great deal of independence is permitted, if not required, of me.	❍	❍	❍	❍	❍	❍	❍	❍

	Strongly agree	Agree	Mildly or somewhat agree	Undecided	Mildly or somewhat disagree	Disagree	Strongly disagree	Not applicable
16) What I do on my job does not add up to anything really significant.	❍	❍	❍	❍	❍	❍	❍	❍
17) There is a lot of "rank consciousness" in this organization: nurses seldom mingle with those with less experience or with other professionals or staff.	❍	❍	❍	❍	❍	❍	❍	❍
18) I am sometimes frustrated because all of my activities seem programmed for me.	❍	❍	❍	❍	❍	❍	❍	❍
19) I am sometimes required to do things on my job that are against my better professional nursing judgement.	❍	❍	❍	❍	❍	❍	❍	❍
20) Based on feedback from nurses in other organizations, the pay at this organization is fair.	❍	❍	❍	❍	❍	❍	❍	❍
21) I am proud to talk to other people about what I do on my job.	❍	❍	❍	❍	❍	❍	❍	❍
22) I wish the physicians here would show more respect for the skill and knowledge of the nursing staff.	❍	❍	❍	❍	❍	❍	❍	❍
23) Physician(s) working with this organization generally understand and appreciate what the nursing staff does.	❍	❍	❍	❍	❍	❍	❍	❍
24) If I had the decision to make all over again, I would still go into nursing.	❍	❍	❍	❍	❍	❍	❍	❍
25) The physician(s) working at this agency look down too much on the nursing staff.	❍	❍	❍	❍	❍	❍	❍	❍
26) I have all the voice in planning policy and procedures that I want.	❍	❍	❍	❍	❍	❍	❍	❍
27) My particular job really doesn't require much skill or "know-how".	❍	❍	❍	❍	❍	❍	❍	❍
28) The nursing administrators generally consult with the staff on daily problems and procedures.	❍	❍	❍	❍	❍	❍	❍	❍
29) I have the support of my supervisor to make important decisions in my work.	❍	❍	❍	❍	❍	❍	❍	❍
30) Pay scales for nursing personnel need to be upgraded	❍	❍	❍	❍	❍	❍	❍	❍
31) Overall, I am very satisfied with my job.	❍	❍	❍	❍	❍	❍	❍	❍

G. About Your Nursing Position

The following are statements concerning your *current nursing position*. Please answer each question by marking off the one answer that best fits your current situation. Sometimes none of the answers fit exactly; please choose the answer that comes closest.

		Strongly agree	Agree	Disagree	Strongly disagree
1)	My nursing position requires that I learn new things	❍	❍	❍	❍
2)	My nursing position involves a lot of repetitive work	❍	❍	❍	❍
3)	My nursing position requires me to be creative.	❍	❍	❍	❍
4)	My nursing position allows me to make a lot of decisions on my own.	❍	❍	❍	❍
5)	My nursing position requires a high level of skill.	❍	❍	❍	❍
6)	On my job, I have very little freedom to decide how I do my work.	❍	❍	❍	❍
7)	I get to do a variety of different things in my job.	❍	❍	❍	❍
8)	I have a lot of say about what happens on my job.	❍	❍	❍	❍
9)	I have an opportunity to develop my own special abilities.	❍	❍	❍	❍
10)	My job requires working very fast	❍	❍	❍	❍
11)	My job requires working very hard.	❍	❍	❍	❍
12)	My job requires lots of physical effort.	❍	❍	❍	❍
13)	I am not asked to do an excessive amount of work.	❍	❍	❍	❍
14)	I have enough time to get the job done.	❍	❍	❍	❍
15)	I am free from conflicting demands that others make	❍	❍	❍	❍

16) What is the most important thing to you about your nursing position?

_____

_____

_____

_____

H. Your Health

Please rate your level of satisfaction with your general health.

1) Are you satisfied or dissatisfied with:

	Very satisfied	Somewhat satisfied	Somewhat dissatisfied	Very dissatisfied
Your health	❍	❍	❍	❍
Your job or main activity	❍	❍	❍	❍
Your life in general	❍	❍	❍	❍

2) In general, would you say your health is:
- ❍ Excellent
- ❍ Very good
- ❍ Good
- ❍ Fair
- ❍ Poor

3) The following questions are about activities you might do during a typical day. Does *your health now limit you* in these activities? If so, how much?

	Yes, limited a lot	Yes, limited a little	No, not limited at all
a. **Moderate activities**, such as moving a table, pushing a vacuum cleaner, gardening, or playing sports (curling, golf)	❍	❍	❍
b. Climbing **several** flights of stairs	❍	❍	❍

4) During the **past 4 weeks**, have you had any of the following problems with your work or other regular daily activities **as a result of your physical health**?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
a. Accomplished less than you would like	❍	❍	❍	❍	❍
b. Were limited in the kind of work or other activities	❍	❍	❍	❍	❍

5) During the **past 4 weeks**, have you had any of the following problems with your work or other regular daily activities as a **result of any emotional problems** (such as feeling depressed or anxious)?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
a. **Accomplished less** than you would like.	❍	❍	❍	❍	❍
b. Did work or other activities **less carefully than usual.**	❍	❍	❍	❍	❍

6) During the **past 4 weeks**, how much did **pain** interfere with your normal work (including both work outside the home and housework)?

Not at all	A little bit	Moderately	Quite a bit	Extremely
❍	❍	❍	❍	❍

7) These questions are about how you feel and how things have been with you during the **past 4 weeks**. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the **past 4 weeks** ....

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
a. have you felt calm and peaceful?	❍	❍	❍	❍	❍
b. did you have a lot of energy?	❍	❍	❍	❍	❍
c. have you felt down-hearted and depressed?	❍	❍	❍	❍	❍

8) During the **past 4 weeks**, how much of the time has your **physical health or emotional problems** interfered with your social activities (like visiting friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
❍	❍	❍	❍	❍

9) Have you ever taken a sick day due to stressors experienced on the job ('mental health day')?

❍ Yes > How many days in the last year? _____

❍ No

10) Have you ever taken a formal (paid) stress leave? ❍ Yes ❍ No (Skip to Section I)

What caused the stress leave?

❍ Personal/family emotional stress

❍ Critical incident stress

❍ Other work related stress

I. Your Feelings and Thoughts During the Last Month

We'd like you to tell us **how often** you felt or thought a certain way. The best way is to answer each question fairly quickly; don't try to count up the number of times you felt a certain way, just mark the choice that seems like a reasonable estimate.

For each question fill in the circle for the category that corresponds to your answer.

		Never	*Almost never*	*Sometimes*	*Fairly often*	*Very often*
1)	In the last month, how often have you felt that you were *not able to control* the important things in your life?	❍	❍	❍	❍	❍
2)	In the last month, how often have you *felt confident* about your ability to handle your personal problems?	❍	❍	❍	❍	❍
3)	In the last month, how often have you felt that *things were going your way*?	❍	❍	❍	❍	❍
4)	In the last month, how often have you felt *difficulties were piling up* so high that you could not overcome them?	❍	❍	❍	❍	❍

J. About your Workplace

Staffing

1) Thinking about your primary workplace, do you agree or disagree with the following statements?

	Agree	*Agree somewhat*	*Disagree somewhat*	*Disagree*	*Not applicable*
a. There is adequate RN staffing	❍	❍	❍	❍	❍
b. There is adequate support staff	❍	❍	❍	❍	❍
c. The "staff mix" is appropriate	❍	❍	❍	❍	❍

Environment at Work

			Agree	Agree somewhat	Disagree somewhat	Disagree	Not applicable
2)	a.	The equipment needed for care is available.	❍	❍	❍	❍	❍
	b.	The equipment needed for care is up-to-date	❍	❍	❍	❍	❍
	c.	Equipment is maintained and ready for use.	❍	❍	❍	❍	❍
	d.	The personnel are trained to use the available equipment	❍	❍	❍	❍	❍
	e.	The work area is too noisy.	❍	❍	❍	❍	❍
	f.	Nursing care supplies are available when needed.	❍	❍	❍	❍	❍
	g.	I feel physically safe during the day while at work.	❍	❍	❍	❍	❍
	h.	I feel physically safe during the evening/night while at work.	❍	❍	❍	❍	❍

Violence in the Workplace

The intent of this series of questions is to gain an understanding of the amount and type of violence experienced by nurses in the workplace. **Please use the following definition of violence as you answer these questions.**

Violence against nurses or nurse abuse is defined in this study as an incident where a nurse experiences any of the following:

- physical assault (e.g. being spit on, bitten, hit, pushed)
- threat of assault (verbal or written threats intending harm)
- emotional abuse such as hurtful attitudes or remarks (insults, gestures, humiliation before the work team, coercion)
- verbal sexual harassment (repeated, unwanted intimate questions or remarks of a sexual nature)
- sexual assault (any forced physical sexual contact including forcible touching and fondling, any forced sexual acts including forcible intercourse)

The time period is the past 4 weeks you worked.

3) In the *past 4 weeks that you worked*, did you experience any of the following while carrying out your responsibilities as a nurse? **Indicate all that apply** and the type of person(s) who was(were) the **perpetrator(s) of the incident(s).**

		NO	YES		PERPETRATOR					
					Patient/ Client	Family/ Visitor	Physician	Nursing Co-worker	Community Member	Other
a.	Physical assault	❍	❍	>	❍	❍	❍	❍	❍	❍
b.	Threat of assault	❍	❍	>	❍	❍	❍	❍	❍	❍
c.	Emotional abuse	❍	❍	>	❍	❍	❍	❍	❍	❍
d.	Verbal / sexual harassment	❍	❍	>	❍	❍	❍	❍	❍	❍
e.	Sexual assault	❍	❍	>	❍	❍	❍	❍	❍	❍

↓

If all NO skip to Section K, page 24.

Comment:

_____

_____

_____

4) If the perpetrator was a patient/client, what was their primary diagnosis? .....

- ❍ Alcohol/drug problem
- ❍ Other psychiatric
- ❍ Dementia
- ❍ Other diagnoses
- ❍ Not applicable

5) What was the most frequent context of the above incident(s) in your workplace? ..... (Mark appropriate answer)

- ❍ Admission
- ❍ Personal care
- ❍ Social activity
- ❍ Talking to client
- ❍ Unprovoked - no care being given
- ❍ Other (specify)

_____

6) Consider ***the most distressing incident*** at work and then decide how accurate each statement is i describing how you felt.

		Agree strongly	*Agree moderately*	*Mixed/Not sure*	*Disagree moderately*	*Disagree strongly*
a.	I never expected this to happen to me.	❍	❍	❍	❍	❍
b.	I feared for my life.	❍	❍	❍	❍	❍
c.	I was afraid I would be seriously injured.	❍	❍	❍	❍	❍
d.	My sleep was disturbed by this incident.	❍	❍	❍	❍	❍
e.	The perpetrator became aggressive with me because my racial origin is different from theirs.	❍	❍	❍	❍	❍
f.	I needed emotional support after this incident.	❍	❍	❍	❍	❍
g.	I expect to be hit by clients, it is just part of the job.	❍	❍	❍	❍	❍
h.	I want education on how to deal effectively with aggressive clients.	❍	❍	❍	❍	❍

Comments:

K. Nursing Knowledge

1) Please mark whether you *agree, somewhat agree, somewhat disagree* or *disagree* with the following statements:

	Agree	*Agree somewhat*	*Disagree somewhat*	*Disagree*	*Not applicable*
a. I feel my knowledge is current	❍	❍	❍	❍	❍
b. I have access to current information that would help me in my job.	❍	❍	❍	❍	❍
c. I know how to operate any special equipment where I work.	❍	❍	❍	❍	❍
d. There is always someone I can call to help me with equipment problems.	❍	❍	❍	❍	❍
e. Adequate orientation is provided for nurses changing practice areas.	❍	❍	❍	❍	❍
f. I have enough opportunities to attend continuing education/ staff development events	❍	❍	❍	❍	❍
g. My employer encourages staff to attend continuing education/ staff development events.	❍	❍	❍	❍	❍
h. I have opportunities to share with others what I have learned at continuing education/staff development events.	❍	❍	❍	❍	❍

2) In the last **twelve months** have you undertaken any of the following activities associated with your work (please mark all that apply)?

	Yes	No
a. Subscribed to a journal	❍	❍
b. Read a journal article	❍	❍
c. Read a 'professional' textbook	❍	❍
d. Participated in a Telehealth conference	❍	❍
e. Done a computer-based literature search on a nursing/disease topic	❍	❍
f. Enrolled in/completed a course at a University	❍	❍
g. Enrolled in/completed a course at a Community College	❍	❍
h. Other (Please specify _____)	❍	❍

3) How do you get *new* information on nursing practice? Indicate which sources you find most useful.

	Don't use	Use		USEFULNESS: Very useful	Somewhat useful	Not particularly useful	Useless
a. Internet	❍	❍	>	❍	❍	❍	❍
b. Library	❍	❍	>	❍	❍	❍	❍
c. Newsletter	❍	❍	>	❍	❍	❍	❍
d. Journal subscription	❍	❍	>	❍	❍	❍	❍
e. Journal club	❍	❍	>	❍	❍	❍	❍
f. Nursing colleagues	❍	❍	>	❍	❍	❍	❍
g. Inservice at work	❍	❍	>	❍	❍	❍	❍
h. Continuing education programs outside workplace	❍	❍	>	❍	❍	❍	❍
i. Other work colleagues (non-nursing)	❍	❍	>	❍	❍	❍	❍
j. Other	❍	❍	>	❍	❍	❍	❍

(Please specify) _____

4) a. Do you perceive barriers to your participation in continuing education?

❍ Yes ❍ No (Skip to Section L)

b. What are those barriers?

_____

_____

_____

L. Career Plans

1) Thinking about the next 12 months, how likely do you think it is that you will lose your job or be laid off?

- ❍ Very likely
- ❍ Fairly likely
- ❍ Not too likely
- ❍ Not at all likely

2) Do you plan to leave your present nursing position?

- ❍ Yes, within the next 6 months
- ❍ Yes, within the next 12 months
- ❍ No plans within the next year

3) If you were looking for another job, how easy or difficult do you think it would be for you to find a satisfactory job in nursing?

- ❍ Very easy
- ❍ Fairly easy
- ❍ Fairly difficult
- ❍ Very difficult

4) Thinking about the next five years, do you plan to: (Mark *all* that apply)

- ❍ Continue nursing in the same location
- ❍ Relocate within the province where you are currently nursing
- ❍ Relocate to nurse in another province in Canada
- ❍ Leave Canada to nurse in another country
- ❍ Go back to school for further education and training *within* nursing
- ❍ Go back to school for further education and training *outside of nursing*
- ❍ Move because of family commitments
- ❍ Move from a rural/isolated community to a large community
- ❍ Retire
- ❍ None of the above

5) Have you been employed outside of nursing in the last 2 years? ❍ Yes ❍ No

6) In your community or nearby are there attractive employment opportunities *outside* of nursing? ❍ Yes ❍ No

7) In your community or nearby are there attractive employment opportunities *in* nursing? ❍ Yes ❍ No

8) How long do you expect to stay in your present job?

- ❍ Less than 1 year
- ❍ 1 - 2 years
- ❍ 2 - 4 years
- ❍ 5 or more years

9) Have you looked for other employment opportunities within the past year?

❍ Yes → ❍ In nursing
❍ Non nursing
❍ Both

❍ No

M. Additional Demographic Questions

1) What size of community did you grow up in?
- ❍ Less than 200
- ❍ 201 - 500
- ❍ 501 - 1,000
- ❍ 1,001 - 2,500
- ❍ 2,501 - 5,000
- ❍ 5,001 - 10,000
- ❍ 10,001 - 20,000
- ❍ 20,001 - 50,000
- ❍ 50,001 - 75,000
- ❍ Over 75,001

2) Are you a Canadian Citizen?
- ❍ Yes (Skip to Question 3)
- ❍ No

↓

Do you have landed immigrant status?
- ❍ Yes (Skip to Question 3)
- ❍ No

↓

Are you in Canada on a work permit?
- ❍ Yes
- ❍ No

3) Are you of Aboriginal or Metis ancestry? .....
- ❍ Yes
- ❍ No

4) Do you have any dependent children or other dependent relatives who live with you? .....
- ❍ Yes → How many _____
- ❍ No

5) Current marital status? .....
- ❍ Married
- ❍ Living with partner
- ❍ Single
- ❍ Divorced
- ❍ Widowed

6) If currently married or living with partner, what is their occupation?

_____

7) Here is a list of gross (before taxes and deductions) categories that correspond to various income levels. What is your current income from *nursing* in the past year (including overtime)?

Yearly	Monthly
❍ Less than $9,999	Up to $833
❍ $10,000 to $19,999	$834 - $1,666
❍ $20,000 to $29,999	$1,667 - $2,499
❍ $30,000 to $39,999	$2,500 - $3,333
❍ $40,000 to $49,999	$3,334 - $4,166
❍ $50,000 to $59,999	$4,167 - $4,999
❍ $60,000 to $69,999	$5,000 - $5,833
❍ $70,000 or more	$5,834 +

8) What percentage of your *nursing income* was from overtime work? __ __ %

9) What percentage of your *nursing income* was from isolation allowances? __ __ %

10) What is your best estimate of the **total income** from all sources (eg. jobs, social security, investments, etc.), before taxes and other deductions, of *all household members* in the past 12 months? (For small businesses and farms **after** expenses.)

Yearly	Monthly
❍ Less than $9,999	Up to $833
❍ $10,000 to $19,999	$834 - $1,666
❍ $20,000 to $29,999	$1,667 - $2,499
❍ $30,000 to $39,999	$2,500 - $3,333
❍ $40,000 to $49,999	$3,334 - $4,166
❍ $50,000 to $59,999	$4,167 - $4,999
❍ $60,000 to $69,999	$5,000 - $5,833
❍ $70,000 to $79,999	$5,834 - $6,666
❍ $80,000 to $99,999	$6,667 - $8,333
❍ $100,000 to $119,999	$8,334 - $9,999
❍ $120,000 +	$10,000 +

N. Comments

Reflections on your role as a rural/remote nurse.

1) How do you define rural/remote?

2) What was your reason for accepting your present position?

3) In what way is your role as a rural/remote nurse different from other nursing roles you have had?

4) How has your education prepared you for your job as a *rural or remote nurse*? Did some elements of your training and education prepare you well? Were other elements of your training and education not particularly useful? Please comment.

5) Do you have any final comments - either complaints, problems or positive experiences about nursing in rural or remote Canada?

Please feel free to write additional comments and attach.

Respondents who wish to verbally relate their experiences or write about them are invited to contact study investigators at 1-866-960-6409 or at *http://ruralnursing.unbc.ca* as they are collecting more detailed narrative comments.

General comments about this questionnaire.

THANK YOU

Appendix B:
Nursing in Rural and Remote Canada Survey Cover Letter

The Nature of Nursing Practice in Rural and Remote Canada

September 2001

Dear Nursing Colleague:

We are writing to ask your help in a study on nursing in rural and remote Canada. We wish to learn more about nurses in rural and remote Canada: Who are they? What is the nature of nursing practice in rural and remote areas? How satisfied are they with their current work situations and the profession of nursing?

It is our understanding that you are a registered nurse practicing in a rural or remote part of Canada. Provincial nursing associations identified such nurses from their registration lists. Though this study is being independently conducted by university based researchers, provincial nursing associations are interested in the findings from the study, have endorsed it, and are facilitative our research efforts by mailing this questionnaire.

This survey will be used to inform policy and program development with regard to nursing in rural and remote areas. By knowing more about the job skills and nursing practice of rural/remote nurses, health agencies, educators and the nursing profession can make the most of what these nurses do to contribute to the health of their communities and do a better job of improving the work environment and quality of working life.

The results of the survey will form the basis of a report to the funding agencies and various governing bodies. An executive summary will be made widely available to study participants (upon request, see enclosed form), the media and will be available on the study website (see below). Various aspects of the survey results will also form the basis of articles submitted to peer-reviewed journals for publication.

Your answers are completely anonymous and confidential, and will be released only as summaries in which no individual's answers can be identified. As the provincial nursing associations mail the questionnaire, we do not know the identity of any of those whom this questionnaire is being sent. When you return your completed questionnaire in the enclosed stamped envelope, the sequence number on the envelope is used to delete your name from the nursing association's mailing list for the survey. Your name is never connected to your answers in any way. This survey is voluntary, however, your input is invaluable. It would be greatly appreciated is you can help us by taking about forty-five minutes to share your experiences and opinions with us. If for some reason you prefer not to respond, please let us know by returning the blank questionnaire in the enclosed stamped envelope.

Please complete the enclosed questionnaire using the special pencil provided, and keep it as a small token of appreciation, as a way of saying thanks for your help.

If you have any questions or comments about this survey, we would be happy to talk with you. Our number is **(306) 966-6260 (collect)**, or you can fax or write us at either address at the bottom of this letter.

For more details on the study check our website at **http://ruralnursing.unbc.ca**.

Thank you very much for helping with this important study.

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